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8 **Counsel for Plaintiff**

9 **UNITED STATES DISTRICT COURT**
10 **SOUTHERN DISTRICT OF CALIFORNIA**

11
12 SHAVONDA HAWKINS, on behalf of
13 herself and all others similarly situated,

14 Plaintiff,

15 v.

16 THE KROGER COMPANY,

17 Defendant.

Case No: 3:15-cv-02320-JM-AHG

18 **DECLARATION OF GREGORY S. WESTON IN**
19 **SUPPORT OF PLAINTIFF'S OPPOSITION TO**
20 **MOTION TO EXCLUDE EXPERT TESTIMONY**
21 **OF DR. NATHAN WONG**

22 Judge: The Honorable Jeffrey T. Miller

1 I, Gregory S. Weston, declare:

2 1. I am a member in good standing of the California Bar and of this Court. I
3 make this Declaration in support of Plaintiff's Opposition to Kroger's Motion to Exclude
4 the Expert Testimony of Dr. Nathan Wong

5 2. Attached hereto as **Exhibit 1** is a true and correct copy of the Expert Report
6 of Dr. Nathan Wong, including Dr. Wong's C.V.

7 3. Attached hereto as **Exhibit 2** is a true and correct copy of Sean W. P. Koppe
8 et al., *Trans fat feeding results in higher serum alanine aminotransferase and increased*
9 *insulin resistance compared with a standard murine high-fat diet*, 297 AM. J. PHYSIOL.
10 GASTROINTEST LIVER PHYSIOL. 378 (2009).

11 4. Attached hereto as **Exhibit 3** is a true and correct copy of Alberto Ascherio et
12 al., *Trans Fatty Acids and Coronary Heart Disease* (November 15, 1999), Plaintiff
13 produced this document on August 8, 2019 bearing Bates numbers HAWKINS966-82.

14 5. Attached hereto as **Exhibit 4** is a true and correct copy of Patrice A. Harris,
15 *AMA: Trans Fat Ban Would Save Lives*, AMERICAN MEDICAL ASSOCIATION (Nov. 7,
16 2013).

17 6. Attached hereto as **Exhibit 5** is a true and correct copy of Jane E. Brody, *The*
18 *Worst Fat in the Food Supply*, NEW YORK TIMES (May 22, 2017).

19 I declare under penalty of perjury that the foregoing is true and correct.

20 Executed on September 21, 2020 in San Diego, California.

21 s/ Gregory S. Weston
22 Gregory S. Weston
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EXHIBIT 1

(Part 1)

Expert Report of Dr. Nathan Wong

Prepared for:

The Weston Firm
1405 Morena Blvd., Suite 201
San Diego, CA 92110

Prepared by:

Dr. Nathan Wong
23 Ville Franche
Dana Point, CA 92629

January 10, 2020

1. I have been retained by the plaintiff in the case *Hawkins v. Kroger Company*, Case No. 3:15-cv-2320-JM-AHG. I have been asked to offer an opinion on Kroger Bread Crumbs during the period they contained trans fat.

Qualifications and Background

2. I am a Professor of Medicine and Epidemiology at the University of California, Irvine School of Medicine. I am also Director of UCI's Heart Disease Prevention Program. From 2010 to 2012, I served as president of the American Society for Preventive Cardiology. I am also a fellow of the American College of Cardiology, a fellow of the American Heart Association Council on Epidemiology and Prevention, and an honorary member of the Academy of Nutrition and Dietetics.

3. I regularly publish articles about epidemiology and the prevention of heart disease and diabetes in peer-reviewed medical journals, and have published over 250 such articles, as author or co-author, to date.

4. I served as editor-in-chief of the textbook *Preventive Cardiology: A Practical Approach*, as well co-editor of *Preventive Cardiology: A Companion to Braunwald's Heart Disease*.

5. I am active in, and familiar with, research on the epidemiology and prevention of both cardiovascular disease and type-2 diabetes.

6. Through the UCI Heart Disease Prevention Program, I direct research and community education efforts to prevent heart disease and reduce associated risks.

7. Attached hereto as Exhibit A is a copy of my *curriculum vitae*, which details, among other things, my qualifications and the publications I have authored.

The Dangers of Artificial Trans-Fat are Well-Established

8. Heart disease is the leading cause of death in the United States, accounting for

23% of American deaths in 2017.¹ The fifth leading cause of death is stroke, another important component of cardiovascular disease, accounting for 5.2% of deaths. The seventh leading cause of death is diabetes, causing 3% of all deaths.

9. It is well-established that artificial trans fat consumption is strongly linked to the risk of many chronic diseases, and heart disease in particular, as well as stroke and diabetes.

10. The danger of consuming trans fat is direct, linear, and progressive with increased consumption. This means that each additional gram of trans fat consumption further damages the body and increases risk of disease.

11. The dangers of trans fat consumption have been the subject of more than one hundred scholarly studies over more than three decades. These studies have been collected into meta-analyses by both academic researchers and by the United States government, who have quantified the harm.

12. As early as 1994, researchers at the Harvard School of Public Health considered the evidence that artificial trans fat causes a grave and unusually large harm to health to be very strong, with “the threshold of evidence for harm . . . far surpassed” and wrote:

[I]t should be the responsibility of those who manufacture and sell an artificial food to show that the product is safe. We believe that the threshold of evidence for harm has been far surpassed in this case; the metabolic data alone should be a sufficient basis for limiting human intake of partially hydrogenated vegetable fat, and the epidemiological data provide further weight. A comparison with the regulation of potential carcinogens in the food supply indicates a gaping double standard.²

13. By 1999, as the body of research into the danger of trans fat grew, several of the same researchers concluded:

[T]wo independent methods of estimation indicate that the adverse effect of trans fat is stronger than that of saturated fat. By our most conservative estimate,

¹ Available at https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_09-508.pdf (last accessed January 3, 2020) and attached hereto as Exhibit B.

² W.C. Willett et al., *Trans Fatty Acids: Are the Effects only Marginal?*, Am. J. Pub. Health 84:722, 723 (1994). (Exhibit C.)

replacement of partially hydrogenated fat in the U.S. diet with natural unhydrogenated vegetable oils would prevent approximately 30,000 premature coronary deaths per year, and epidemiologic evidence suggests this number is closer to 100,000 premature deaths annually.³

14. Dr. Julie Louise Gerberding, long-time head of the United States Centers for Disease Control and Prevention summarized the toxicity of artificial trans fat, finding in a 2009 article that the case against trans fat use is “rock solid”:

The scientific rationale for eliminating exposure to artificial trans fatty acids in foods is rock solid. There is no evidence that they provide any health benefit, and they are certainly harmful. These compounds adversely affect both low- and high-density lipoprotein cholesterol levels and increase the risk for coronary heart disease, even at relatively low levels of dietary intake. Gram for gram, trans fats are far more potent than saturated fats in increasing the risk for heart disease, perhaps because they also have proinflammatory properties and other adverse effects on vascular endothelium.⁴

15. Dr. Dariush Mozaffarian—long time professor at Harvard School of Public Health and now dean and professor of cardiology at the Friedman School of Nutrition Science and Policy at Tufts—also supports the elimination of trans fat consumption. In a New England Journal of Medicine article from 2006 he concluded:

food manufacturers should choose to use alternative fats in food production and preparation. These steps should help reduce the consumption of trans fatty acids, possibly resulting in substantial health benefits such as averting thousands of CHD events each year in the United States.⁵

16. Another noted trans fat researcher, Fred Kummerow of the University of Illinois, concluded:

Partially hydrogenated fats change plasma lipid levels in negative ways. They calcify cells and cause inflammation of the arteries, which are known risk factors

³ Alberto Ascherio *et al.*, *Trans Fatty Acids & Coronary Heart Disease*, New Eng. J. Med. 340:94-8 (1999). (Exhibit D)

⁴ Julie Louise Gerberding, *Safer Fats for Healthier Hearts: The Case for Eliminating Dietary Artificial Trans Fat Intake*, Annals of Internal Medicine, Vol. 151 No. 2 p. 137 (2009). (Exhibit E.)

⁵ Dariush Mozaffarian *et al.*, *Trans Fatty Acids and Cardiovascular Disease*, New England Journal of Medicine 354:1601-13 (2006). (Exhibit F.)

in heart disease. They are not metabolized the same way as the trans vaccenic acid in ruminant fat and are not harmless. Trans fats inhibit cyclooxygenase (COX-2) an enzyme which converts arachidonic acid to an eicosanoid that is necessary to prevent blood clots in the arteries and veins. A blood clot in the coronary arteries can result in sudden death. . . . The only course to protect the health of consumers is to eliminate the production of partially hydrogenated trans fats.⁶

17. Artificial trans fats, in addition to raising levels of LDL cholesterol, also increases levels of lipoprotein(a), commonly abbreviated lp(a), which is similar in structure to LDL, and has similar damaging effects on the cardiovascular system.⁷

18. “[E]levated lp(a) levels associate robustly and specifically with increased [cardiovascular disease] risk. The association is . . . without a threshold and does not depend on high levels of LDL or non-HDL cholesterol, or on the levels or presence of other cardiovascular risk factors.”⁸ In particular, Dr. Aro and his colleagues, summarizing numerous other studies, found a significant association between lp(a) and coronary death, non-fatal myocardial infarction, and ischaemic stroke. They further found (although inconclusively) it linked to hemorrhagic stroke. *Id.* at 2848.

19. Trans fat consumption is also linked to an increased risk for developing diabetes,⁹ breast cancer,¹⁰ prostate cancer,¹¹ and colon cancer.¹²

⁶ Fred A. Kummerow, *The negative effects of hydrogenated trans fat and what to do about them*, *Atherosclerosis* 205:458-465 (2009). (Exhibit G.)

⁷ Antti Aro et al., *Stearic acid, trans fatty acids, and dairy fat: effects on serum and lipoprotein lipids, apolipoproteins, lipoprotein(a), and lipid transfer proteins in healthy subjects*, *Am. J. of Clinical Nutrition* 65:1423, Table 6 (1997)

⁸ B.G. Nordestgaard et al., *Lipoprotein(a) as a cardiovascular risk factor: current status*, *European Heart Journal* 31, 2846 (2010)

⁹ Jorge Salmeron et al., *Dietary Fat Intake and Risk of Type 2 Diabetes in Women*, *Am. J. of Clin. Nutrition* 73:1019, 1023 (2001) (Exhibit H).

¹⁰ Véronique Chajès et al., *Association between Serum Trans-Monounsaturated Fatty Acids and Breast Cancer Risk in the E3N-EPIC Study*, *Am. J. of Epidemiology* 167:1312, 1316 (2008) (Exhibit I).

¹¹ Jorge Chavarro et al., *A Prospective Study of Trans-Fatty Acid Levels in Blood and Risk of Prostate Cancer*, *Proc. Am. Assoc. of Cancer Research* 47:95, 99 (2008) (Exhibit J).

Kroger's Addition of Trans Fat to Kroger Bread Crumbs Caused Increased Morbidity and Mortality Among Its Customers

20. The increase in mortality and morbidity caused by consumption of trans fat is progressive and linear with the amount of trans fat consumed.¹³ As the Institute of Medicine of the National Academies of Science notes, “*any* incremental increase in trans fatty acid intake increases” the risk of coronary heart disease.¹⁴ The FDA agrees that “[t]here is a positive linear trend between trans fatty acid intake and LDL cholesterol concentration, and therefore there is a positive relationship between trans fatty acid intake and the risk of” coronary heart disease.¹⁵ And the U.S. Department of Health and Human Services and the U.S. Department of Agriculture recognize that “[t]he relationship between trans fatty acid intake and LDL cholesterol is direct and progressive, increasing the risk of cardiovascular disease.”¹⁶

21. Similarly with prostate cancer, there is “a statistically significant positive linear association (p-trend = 0.01)” between consumption of trans fat and this debilitating and often deadly disease.¹⁷

22. I reviewed the information contained in the product labels of Kroger

¹² Lisa C. Vinikoor, *et al.* *Consumption of Trans-Fatty Acid and Its Association with Colorectal Adenomas*, American Journal of Epidemiology 168:289 (2008) (Exhibit K).

¹³ Alberto Ascherio *et al.*, *Trans Fatty Acids & Coronary Heart Disease*, New Eng. J. Med. 340:94 (1999) (Exhibit D); D. Mozaffarian and R. Clarke; *Quantitative effects on cardiovascular risk factors and coronary heart disease risk of replacing partially hydrogenated vegetable oils with other fats and oils*; European J. of Clin. Nutrition S22, S22–S33 (2009) (Exhibit L).

¹⁴ Panel on Macronutrients, Institute of Medicine, *Letter report on dietary reference intakes for energy, carbohydrate, fiber, fat, fatty acids, cholesterol, protein and amino acids* (2002) (Exhibit M) (emphasis added).

¹⁵ 75 Fed. Reg. at 76542.

¹⁶ Dep’t of Health & Human Serv. & U.S. Dep’t of Agric., 2005 Dietary Guidelines Advisory Committee Report, Section 10 (2005) (available at http://health.gov/dietaryguidelines/dga2005/report/HTML/D10_Conclusions.htm) (last visited January 7, 2020).

¹⁷ Chavarro, *supra*, at 99 (Exhibit J).

Breadcrumbs, which are attached hereto as Exhibit N. I am able to use this information, together with sales information, to estimate the harm of consuming Kroger Bread Crumbs (“the Product”).

23. According to these labels, on average, Kroger Bread Crumbs contain 1.5 grams of total fat per serving, and the only significant (more than 2%) source of fat listed in the ingredients in partially hydrogenated vegetable oil, which is typically 25-40% trans fat by weight. This provides a range of trans fat per serving of .375 and .6 grams. Because amounts in the range of .5 and .6 grams would be rounded on the label to .5, I assume the range in the Product was between .375 and .49 grams per serving. As each container contains 15 servings, this means each container contained between 5.625 and 7.35 grams of trans fat.

24. According to Kroger’s Third Supplemental Response to Plaintiff’s Interrogatory No. 1, Kroger sold 344,422 containers of Kroger Bread Crumbs in California in 2014. Each unit contained approximately 5.625 and 7.35g of trans fat, meaning Kroger placed between 1,937,374 and 2,531,502 grams of trans fat into consumers’ diets in 2014.

25. As noted above, a 1999 epidemiological study published in the *New England Journal of Medicine* showed that, on a national scale, trans fat consumption is responsible for 100,000 deaths per year from coronary heart disease.¹⁸ Indeed, for every 2% of energy increase in trans fat consumption (4.4 grams of trans fat per day given a standard 2,000 calorie diet) one’s risk of coronary heart disease increases 93%.¹⁹

26. The population of the United States in 1999, the year of the study, was 274 million, while the average trans fat consumption was 5.3 grams per day.²⁰ The amount of trans fat that caused 100,000 coronary deaths, then, was:

$$(274,000,000 \text{ people}) * (5.3 \text{ g} / (\text{person per day})) * (365 \text{ days}) = 530,053,000,000 \text{ grams.}$$

¹⁸ Alberto Ascherio *et al.*, *Trans Fatty Acids & Coronary Heart Disease*, New Eng. J. Med. 340:94 (1999) (Exhibit D).

¹⁹ Frank B. Hu *et al.*, *Dietary Fat Intake and the Risk of Coronary Heart Disease in Women*, New England Journal of Medicine Vol 337 No 21 p. 1491 (1997). (Exhibit O)

²⁰ David B. Allison, *Estimated intakes of trans fatty and other fatty acids in the US population*, J. Am. Diet Assoc. 99:166-74 (1999).

Thus, in any given year, consumption of 5,300,530 grams of trans fat is responsible for one death from coronary heart disease.

27. Over the eight years at issue here, Kroger's practice of using PHO and therefore industrial trans fat in Kroger Bread Crumbs likely caused the preventable death of 3 or 4 Californians from heart disease, and to the extent sales in other states were proportional, the deaths of about 25-30 Americans in total.

28. In addition to these deaths, the use of industrial trans fat caused additional non-fatal heart attacks and other illnesses to which trans fat contributes.

29. I agree with the FDA's complete ban of artificial trans fat, and believe, as a matter of accurate labeling, that the "0g Trans Fat" claim in large type on the front of Kroger Bread Crumbs was misleading.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on January 9, 2020 in Dana Point, California



Nathan Wong

EXHIBIT A

Updated 01/07/20

NATHAN D. WONG, PhD, FACC, FAHA, FNLA, FASPC
Professor and Director
Heart Disease Prevention Program
Division of Cardiology, Department of Medicine
University of California, Irvine
Adjunct Professor of Epidemiology, UC Irvine and UCLA
Adjunct Professor of Radiological Sciences, UC Irvine
Adjunct Professor of Public Health, UC Irvine

Heart Disease Prevention Program
C240 Medical Sciences, UC Irvine
Irvine, California 92697-4079 USA
Phone: (949) 824-5561, (949) 824-5433

E-mail: ndwong@uci.edu

Web Site: www.heart.uci.edu

EDUCATION:

1983 B.A. Pomona College, Claremont, CA - Biochemistry
1985 M.P.H. Yale University, New Haven, CT - Epidemiology
1987 Ph.D. Yale University, New Haven, CT - Epidemiology

Fellowships / Other Training:

2016 – present Fellow, American Society for Preventive Cardiology
2014- present Fellow, National Lipid Association
1991 - present Fellow, American Heart Association, Council on Epidemiology and Prevention
1995 - present Fellow, American College of Cardiology (Associate Fellow 1993-95)
1996 - Lipid Disorders Training Course, Gladstone Institute, Lawrence Berkeley Laboratory, UC San Francisco
2001-2002 – Cardiovascular Health Fellow, Health Forum, American Hospital Association
2009 – Research Methods Training Course, European Association for Cardiovascular Prevention and Rehabilitation, European Society of Cardiology

ACADEMIC AND OTHER APPOINTMENTS:

2003 - present Adjunct Professor of Medicine (primary appointment) (Step VII since 7/2015)), Division of Cardiology, Dept. of Medicine, University of California, Irvine, College of Medicine, Irvine, California
2003- present Adjunct Professor of Epidemiology, Dept. of Epidemiology, School of Public Health, University of California, Los Angeles and UC Irvine, WOS (since 2009) (joint appts.)
2011-present Adjunct Professor of Radiological Sciences, UC Irvine (joint appt. WOS)
2017-present Adjunct Professor of Public Health, UC Irvine (joint appt. WOS)

1994 – 2003 - Associate Adjunct Professor of Medicine, Division of Cardiology, Dept. of Medicine, University of California, Irvine, College of Medicine, Irvine, California
1995 - 2003 Associate Adjunct Professor, Dept. of Epidemiology, UCLA School of Public Health, Los Angeles, California (see teaching below)
1991 - present - Director, UCI Heart Disease Prevention Program
Division of Cardiology, Department of Medicine, University of California, Irvine, College of Medicine, Irvine, California
1997 – 1998 Senior Investigator, Cardiovascular Diseases / Diabetes, Southern California Permanente Medical Group
1988- 1994 Assistant Adjunct Professor, Division of Cardiology, Department of Medicine, University of California, Irvine
1987 Lecturer in Medicine, Department of Medicine, Yale University School of Medicine, New Haven, CT
1986 - 1987 Teaching Fellow II (biostatistics), Dept. of Epidemiology, Yale University School of Medicine, New Haven, CT

HONORS / AWARDS:

2017 - Elected Full Professor, European Center for Peace and Development
2016, 2017 - Service Award, Pacific Lipid Association
2015 – Educator of the Year, California Chapter, American College of Cardiology
2015 - Jeremy Swan Memorial Lecture, International Academy of Cardiology, World Congress on Heart Disease, July, 2015
2014 – Honorary Member, Academy of Nutrition and Dietetics
2014 - Honorary Fellowship Award, International Academy of Cardiology
2013 – Honorary Member, Republic of Srpska (Bosnia and Herzegovina) Society of Cardiology
2013 – Elected International Member - Academician, Academy of Sciences and Arts of the Republic of Srpska (Bosnia and Herzegovina)
2013 – Visiting Professor, University of Belgrade, Belgrade, Serbia

2011 – Jan J. Kellermann Memorial Award for distinguished work in the field of Cardiovascular Disease Prevention, International Academy of Cardiology
2010 – International Cooperation Prize, 21st Great Wall Congress of Cardiology, Beijing, China
2010 – Outstanding Research Mentor, Division of Cardiology, UC Irvine

PROFESSIONAL ACTIVITY:

Society Memberships / Committees / Positions:

2007 – American Society for Preventive Cardiology, President (2010-2012), Board Member at Large (2016-2019)
2012-Present, President (2018-2019), Board of Directors (thru 2020), Pacific Lipid Association (chapter of the National Lipid Association)
2014- Present, Board of Directors (President-Elect 2018-present), Interamerican Heart Foundation
2010-2016, Board of Directors (Secretary), China-California Heartwatch
2015- Present, Member, Prevention of Cardiovascular Disease Leadership Council, Member Services Committee, American College of Cardiology
2015- Present, Diabetes Collaborative Registry Research and Publications Committee (Chair, 2018-present)
2014- Present, Member, Cardiometabolic and Diabetes Working Groups, American College of Cardiology
2013- 2015, Chair, Prevention Science Committee, American Heart Association, 2012 - Vice-Chair, Interdisciplinary Council on Prevention, American Heart Association, Council on Epidemiology and Prevention
2012- 2014, and 2016-present Board of Directors, American College of Cardiology California Chapter and District Councilor, Orange County-San Bernardino
2011-2015, Board of Directors, American Heart Association, Orange County (CA) Division
2008 – 2010 - Board of Directors, Dick Butkus Center for Cardiovascular Wellness
2007 – present - Board of Directors, China California Heartwatch (Vice President 2012-2013)
2011 – present - Member, Education and Training Working Group, World Heart Federation
2010 – 2012 - Member, Fall Program Committee, Scientific Sessions, American Heart Association
2009-2012 – Member, Leadership Committee and Program Committee, Council on Epidemiology and Prevention, American Heart Association
2008-present – Member, Statistics Committee, American Heart Association
2002-2004 Member, Prevention of Cardiovascular Disease Committee, American College of Cardiology
2003-2009 Member, Credentialing and Membership Committee, American College of Cardiology

2001-2003 Board of Directors (Vice Chair since December 2002), Foundation for the Prevention of Cardiovascular Disease and Stroke, California Chapter, American College of Cardiology

2001-2005 Member, California Heart Disease and Stroke Program Advisory Committee, California Department of Health Services

2000 Member, Medical Advisory Board, American Heart Association, Orange County, CA

1998 – 1999 Chair, California Cardiovascular Disease Prevention Coalition (member since 1996), California Department of Health Services

1995-1997 - Board Member, Executive Committee, American Heart Association (national) Council on Epidemiology and Prevention; member Epidemiologic Statistics Committee (1996 - 1998)

1994-2001 - Board of Directors, American Heart Association, Orange County, CA Division; Vice Chair, Program Advisory Committee, 1993-1994

1995 - Member, Physician-Physician/Scientist Task Force on Affiliations, American Heart Association California Affiliate

1995 - Present - Member, California Prevention 2000 Advisory Council, CA State Department of Health Services; Chair, Epidemiology Committee (1996-present)

Member, Marquis' Who's Who in America (Since 2006)

Member, Marquis' Who's Who in the World (Since 2007)

Member, Marquis' Who's Who in Science and Engineering (Since 2007)

Member, Marquis' Who's Who in Medicine and Healthcare (Since 2009)

Member, Strathmore's Who's Who (2002)

Premium Professional Member, American Heart Association

Member, European Association for Cardiovascular Prevention and Rehabilitation, European Society of Cardiology

Member, National Lipid Association

Journal and Other Editorial Boards / Reviewer:

Executive Editor, American Journal of Preventive Cardiology (2020-)

Deputy Editor, Global Heart, World Heart Federation

Section Chief Editor, Epidemiology and Prevention of Cardiovascular Diseases, Frontiers in Cardiovascular Medicine (2017-2020)

Senior Associate Editor, Cardiovascular Endocrinology and Metabolism

Editor, Cardiometabolic Clinical Community, American College of Cardiology (since July 2013)

Co-Editor-in-Chief, World Journal of Cardiology

Editorial Consultant, JACC Cardiovascular Imaging

Editorial Board, Journal of Clinical Hypertension

Editorial Board, American Journal of Cardiovascular Drugs

Editorial Board, Metabolic Syndrome and Related Disorders

Editorial Board, Archives of Medical Science
Associate Editor in Chief, Journal of Geriatric Cardiology
Section Editor, Current Cardiovascular Risk Reports
Section Editor, Current Cardiology Reports

Reviewer for:

Annals of Internal Medicine
American Heart Journal
American Journal of Cardiology
American Journal of Cardiovascular Drugs
American Journal of Epidemiology
Annals of Epidemiology
Arteriosclerosis, Thrombosis and Vascular Biology
Circulation
Diabetes Care
Journal of the American College of Cardiology
Journal of the American College of Cardiology: Cardiovascular Imaging
Metabolic Syndrome and Related Disorders
Stroke

American Heart Association Scientific Sessions Abstract Reviewer (various years since 1996)
American Heart Association Council on Epidemiology and Prevention Abstract Reviewer (Various years since 2009)
American Diabetes Association Abstract Reviewer (2015)
European Society of Cardiology Abstract Reviewer (various years including 2019)
American College of Cardiology Abstract Reviewer (Various years since 2010)
International Congress on Coronary Artery Disease Abstract Reviewer (Various years since 2003)
World Congress on Heart Disease Abstract Reviewer (Various years since 2008)

UNIVERSITY AND PUBLIC AND OTHER SERVICE

Departmental Service:

2010-Present: Co-director of the UCI Cardiovascular Center's Preventive Cardiology Program (with Shaista Malik, MD, PhD, Medical Director) - clinic for primary and secondary prevention of cardiovascular disease in patients with cardiovascular risk factors. Helped develop the clinic and provide ongoing guidance on administrative and personnel issues.

1999-present -Coordinator, Cardiology Fellows Research Conferences / Grand Rounds

University / Medical School Service:

2006- 2010 – Member, Conflict of Interest Oversight Committee
2008 – present – Member, Scientific Review Committee, Institute for Clinical and Translational Science
2001-2008 – Member and Vice Chair, Dean’s Scientific Advisory Committee (merged into Scientific Review Committee since 2008—see above).
2001-2002 – Member, Dean’s Task Force for Community and Environmental Medicine
2001-2003 – Member, General Clinical Research Center Advisory Committee
2001-2002 - Member, Get With The Guidelines Performance Improvement Committee, UCI Medical Center
1988- 1997, and 1999-present - Medical School Admission Committee Interviewer (member of review committee 1996-1997)
1996 - 1997 - Member, Institutional Review Board, Human Research Administration
1990-1991 - Member, Dean’s Task Force on Epidemiology and Biostatistics
1989 - Reviewer, University of California Press

Academic Teaching / Grand Rounds for University of California and Other Academic Institutions

May 1988 - Dept. of Medicine Subspecialty Conference: “Risk Factors Post-Myocardial Infarction”
1989 - Biostatistics lectures in Occupational Epidemiology Course, Dept. of C & E Med.
1989, 1991 - Biomedical Statistics and Data Analysis in Clinical Research (8 wks, 2 hrs/wk) offered to graduate students, residents, fellows w/ CME credit available.
August 1990 - Speaker, Long Beach VA Gerontology Conference “How to Design Clinical Research Studies”
May 1992 - Speaker, Symposium on Aging, UC Irvine “Cholesterol and Cardiovascular Risk Factors Post-Myocardial Infarction in the Elderly”
June 1992 - Speaker, Long Beach VA Gerontology Conference “Ultrafast Computed Tomography in the Detection of Coronary Artery Disease”
Speaker, Cardiology and Pulmonary Divisions, Harbor-UCLA Medical Center
“Prognosis after Myocardial Infarction: Insights from the Framingham Heart Study”
Speaker, Brown-Bag Research Conference, UC Irvine “Secondary Prevention of Coronary Disease”
August 1992 - Speaker, Cardiology Journal Club, Long Beach “Ultrafast CT”
October 1992 - Guest Lecturer, Preventive Medicine course for 2nd year students
November 1992 - Speaker, Diabetes Research Program “Lipid treatment programs / heart disease prevention center activities”
January 1993 - Dept. of Medicine, UCI, Medical Grand Rounds
April 1993 - Epidemiology Program Brown Bag Lecture Series
April 1994 - UCI Cardiology fellows lecture series
May 1994 & June 1995 - Cardiology Division, Harbor-UCLA Medical Center

September 1993, 1996 - Expert consultant, UCI Medical School Patient-Doctor II course (cardiac module)

February 1995 - Biostatistics I and II, UCI Cardiology Fellows Lecture Series, Long Beach VA

May 1995 - Faculty speaker, Clinical Trials Course, University Extension, UCI

September 1994 - Speaker, Ultrafast CT, Cardiology Update Symposium sponsored by UCI Division of Cardiology, Orange County Medical Assn.

October 1994 - Epidemiology of Chronic Diseases course, Dept. of Epidemiology, UCLA School of Public Health

November 1994 - OBGYN Medical Grand Rounds, UCIMC, Women and Coronary Artery Disease

February 1995 - Coronary Artery Calcium: Assessment of Risk for Coronary Artery Disease and Prognosis: Dept. of Epidemiology, UCLA School of Public Health

July 1995 - Medical Grand Rounds, UCI Community Clinic of Orange County, Santa Ana "Prevention of CAD and the ALLHAT Hypertension Trial"

September 1996 - University Club lecture series, UC Irvine

November 1995 & November 1996 - Practical Methods in Diabetes Management, Hyperlipidemia workshop, UCI Diabetes Research Center

August 1998 - Faculty speaker, Cardiology Research Conference

September 1998 - Faculty speaker, Lipids, Biochemistry course for medical students

April 1999, 2000 - Lecturer, Mechanisms of Disease Course, Risk Factor Management

October 1999 - Diabetes and Cardiovascular Disease (lecture on coronary calcium), UCI Continuing Medical Education course, Acapulco, Mexico

February 2000 and April 2000 - Cardiology Fellows' Teaching Conference lectures on biostatistics and research design

June 2000 - "Coronary Calcium Screening: Facts, Future, Controversy", Medical Grand Rounds, UCI Medical Center

June 2000 - Guest lecturer, Diversity in Medicine series, UCI College of Medicine

September 2000 - Coronary Calcium Evaluation of Subclinical Disease - Cardiology Research Conference, UCI Medical Center

September 2001 - Lecturer, Surrogate Measures of Atherosclerosis, Cardiology Fellows lecture series, UCI Medical Center

September 2001 - Lecturer, Study design and data management, Cardiology Fellows lecture series, UCI Medical Center

November 2001 - Get With the Guidelines Secondary Prevention, Residents noon conference, UCI Medical Center

January 2002 - Lipid management, Cardiology Subspecialty noon conference, UCI Medical Center

May 2002 - Prevention of Cardiovascular Disease, Cardiology Subspecialty noon conference, UCI Medical Center

May 2002 - Coronary calcium as a surrogate marker of atherosclerosis: implications in clinical trials - Cardiology research conference, UCI Medical Center

August, November 2002 - Lecturer, research study designs and statistical analysis, Cardiology Fellows lecture series, UCI Medical Center

October 2002 – Lecture on Prevention of Cardiovascular Disease, UCI Mini Medical School
December 2002 – Coronary Calcium as a Surrogate Marker of Atherosclerosis: Implications in Clinical Trials, Medical Grand Rounds VA Medical Center, West Los Angeles, CA
January 2003 – Lipid Management – Noon Conference, Department of Internal Medicine, UCI Medical Center
June 2003 – Metabolic Syndrome and Coronary Heart Disease, Cardiology Research Conference, UCI Medical Center
July 2003 – Lectures on Primary and Secondary Prevention of Coronary Heart Disease, Cardiology Fellows morning core lecture series, UCI Medical Center
September 2003 – Lecture on subclinical measures of atherosclerosis, Cardiology Fellows morning core lecture series, UCI Medical Center
August and September 2004 – Primary and Secondary Prevention of Cardiovascular Disease, Cardiology fellows core teaching series, UCI Medical Center
September 2004 – Hypertension, dyslipidemia, and the metabolic syndrome – UCI Family Health Center, Santa Ana, CA
October 2004 – New Concepts in Preventive Cardiology – Topics in Medicine lecture to 2nd year medical students, UC Irvine and Minority Biological Research Program, UC Irvine
December 2004 – Research study design, cardiology how-to fellows conference, UCI Medical Center, Orange, CA
January 2005 – Dyslipidemia – Internal Medicine resident conferences at UCIMC and Long Beach VA Medical Center
April 2005 – Coronary calcium evaluation and risk assessment, cardiology fellows research conference, UCIMC
July 2005 – Assessment of Subclinical Disease: Implications for Coronary Risk Assessment, Medical Grand Rounds, Department of Medicine, UCIMC
November 2005 – Research study design, Cardiology Research Conference, UCIMC
January 2006 – Statistical methods, Cardiology Research Conference, UCIMC
March 2006 – Prevention of Cardiovascular Disease Guidelines, Cardiology Research Conference, UCIMC
March, April, May, July, August, December 2006 and February 2007 – ALLHAT / JNC-7 hypertension dissemination lecture programs, UCI Medical Center, Long Beach VA Medical Center, Rancho Los Amigos Medical Center, UCI Family Health Center, and Placentia Linda Hospital, St Joseph's Hospital, Irvine Regional Medical Center.
May 2006 – Metabolic Syndrome: 2006 Update, Cardiology Research Conference, UCIMC
October 2006 – Subclinical atherosclerosis, Cardiology Research Conference, UCIMC
February 2007 – Metabolic Syndrome, Endocrinology Grand Rounds, UCI Medical Center
June 2007 – Subclinical atherosclerosis, Student Research Program, Dept. of Imaging, Cedars-Sinai Medical Center
July 2007 – Lectures on Hypertension and Metabolic Syndrome, Dept of Family Practice conference, UCI Family Health Center, Santa Ana

July 2007 – Lecture on Dyslipidemia – Cardiology Fellows How-To-Lecture, UCI Medical Center
January 2008 – Dyslipidemia, Internal Medicine Residency, UCI Medical Center and Long Beach VA Medical Center
June 2008 – Journal Clubs for Internal Medicine and Geriatrics
July 2008 – Metabolic syndrome, Family practice residency, UCI Family Health Center, Santa Ana, CA
August 2008 – Dyslipidemia / Statistics II – Cardiology fellows how-to-lectures, UCI Medical Center, Orange, CA
September 2008 – Statistics and Research Design – Cardiology Research Conference, UCI Medical Center, Orange, CA
January 2009 – CVD Prospective Studies – Cardiology Research Conference, UCI Medical Center, Orange, CA
May 2009 – Metabolic Syndrome and CVD – Cardiology Research Conference, UCI Medical Center, Orange, CA
July 2009, August 2010 – Dyslipidemia – Cardiology Boot Camp, UCI Medical Center, Orange, CA
July 2009 – Cardiovascular disease prevention - American Cancer Society student internship program, UCI campus, Irvine, CA
August 2009, 2010 – Statistics – Cardiology Boot Camp, UCI Medical Center, Orange, CA
August 2009 – Dyslipidemia – Family practice residency, UCI Family Health Center, Santa Ana, CA
January 2010 – Dyslipidemia Management – Dept. of Pathology, UCIMC
February 2010 – Metabolic Syndrome, Diabetes and CVD – Cardiology Research Conference, UCIMC
April 2010 – Subclinical Atherosclerosis – Cardiology Research Conference, UCIMC
July 2010 – Metabolic Syndrome, Diabetes, and CVD – Dept of Pathology, UCIMC
August 2010 – Research Design and Statistics; Dyslipidemia; Cardiology Boot Camp, UCI Medical Center, Orange, CA
December 2010 – Imaging for Prevention – Cardiology Conference, UC Davis
January 2011 – New Concepts in Dyslipidemia Management – Internal Medicine Residency, UC Irvine Medical Center, Orange, CA and VA Medical Center, Long Beach, and Endocrinology fellowship, UC Irvine.
April 2011 – Imaging for Prevention – Cardiology Grand Rounds Research Conference, UCIMC
June 2012 – Dyslipidemia – Dept of Family Medicine Grand Rounds, UCI Family Health Center
August 2011 – Research Methods and Statistics lectures for cardiology fellows, UCIMC
September 2011 – Evaluation and Management of Dyslipidemia – Cardiology grand rounds, UCIMC
December 2011 – Subclinical Atherosclerosis – Radiology grand rounds, UCIMC
March 2012 – Metabolic Syndrome, Diabetes, and CVD – Dept of Family Medicine Grand Rounds, UCI Family Health Center

April 2012 – Dyslipidemia Management Beyond LDL: Role of HDL – Cardiology grand rounds, UC Davis Medical Center
May 2012 – Imaging for Prevention – Cardiology Grand Rounds Research Conf, UCIMC
August 2012 – Metabolic Syndrome, Diabetes, and CVD; Research Study Design and Statistics; Cardiology Boot Camp, UCI Medical Center, Orange, CA
May 2012 – Is Diabetes a CHD Risk Equivalent? Dept. of Epidemiology, UCI Research Seminar
September 2012 – Dyslipidemia Beyond LDL-C: Role of HDL-C, Cardiology Grand Rounds Research Conference, UCIMC
April 2013 – Metabolic Syndrome, Diabetes, and CVD – Dept of Preventive Medicine, UC San Diego
April 2014 – Interpreting the ACC/AHA Cholesterol Management and Prevention Guidelines - Medical Grand Rounds, Harbor-UCLA Medical Center, Torrance, CA
May 2013 - Metabolic Syndrome, Diabetes and CVD in Asians – UCSF Asian Health Symposium, UC San Francisco, CA
May 2013 – Evidence Based CVD Risk Assessment – Epidemiology Seminar, Dept of Epidemiology, UC Irvine
June 2013 – Evidence Based CVD Risk Assessment – Cardiology Conference, UC Davis
August 2013 – Metabolic Syndrome, DM and CVD – Cardiology Fellows Boot Camp, UC Irvine
August 2013 – Statistics in Cardiology – Cardiology Fellows Boot Camp, UC Irvine
September 2013 – Dyslipidemia Management: Implications of Recent Trials and Emerging Therapies – Cardiology Grand Rounds, UC Irvine
August 2014 – ACC AHA Guidelines for CVD Risk Assessment – Cardiology Fellows Boot Camp, UC Irvine
September 2014 – ACC AHA Guidelines for Cholesterol Management and Prevention of Cardiovascular Disease – Cardiology Grand Rounds, UC Irvine
December 2014 – Metabolic Syndrome, Diabetes, and CVD – Cardiology Grand Rounds, UC Irvine
February 2015 – Interpreting the ACC/AHA Guidelines on Cholesterol Management and Cardiovascular Disease Prevention. Medical Grand Rounds, Department of Medicine, UC Irvine
October 2015 – ACC AHA Prevention of CVD Guidelines, Cardiology Grand Rounds, UC Irvine
February 2016 – Update on Coronary Calcium and Implications in Preventive Cardiology, Cardiology Conference, UC Davis
September 2016 – ACC AHA Guidelines for CVD Prevention, Cardiology Grand Rounds, UC Irvine
March 2017 - PCSK9 Monoclonal Antibody Therapy for Dyslipidemia, Cardiology Grand Rounds, UC Irvine
May 2017 - PCSK9 Monoclonal Antibody Therapy for Dyslipidemia, Cardiology Grand Rounds, UC Davis
August 2017 – Research Study Design for Cardiologists, Cardiology Boot Camp, UC Irvine

August 2017 – Prevention of Cardiovascular Disease, Spanish Medical Students Course, UC Irvine Extension, UC Irvine
September 2017 – ACC/AHA Guidelines for Cardiovascular Disease Prevention and Cholesterol Management, Cardiology Grand Rounds, UC Irvine
January 2018 – Cardiometabolism, Medical Grand Rounds and Endocrinology Grand Rounds, UC Irvine
February 2018 – Cardiometabolism, UC Davis Cardiology Grand Rounds, Sacramento, CA
March 2018 – Prevention of CVD Guidelines, Center for Occupational and Environmental Health, UC Irvine
March 2018 – Hypertension and Cholesterol Management lectures, Caremore / University of Arizona Cardiology Symposium, Tucson, AZ
April 2018 – PCSK9 Monoclonal Antibody Therapy for Dyslipidemia – Cardiology conference, Harbor-UCLA Medical Center, Torrance, CA
May 2018 – Familial Hypercholesterolemia lecture for medical students biochemistry course, UC Irvine
May 2018 – Cardiometabolism lecture, Cardiology Grand Rounds, UC Irvine
July 2018 - Prevention of CVD and Cholesterol Management Guidelines, Medical Grand Rounds, UC Davis
January 2019 – Multisociety Cholesterol Guidelines, UC Irvine Cardiology Grand Rounds
March 2019 – Multisociety Cholesterol Guidelines, UC Davis Cardiology Grand Rounds
April 2019 – Multisociety Cholesterol Guidelines, Harbor UCLA Cardiology Conference
July 2019 - CVD Risk Assessment and Subclinical Atherosclerosis – Engineering Seminar, School of Engineering, UC Irvine
October 2019 – Cardiology Fellowship Interview Lectures
October 2019 – Cholesterol Management Guidelines and Newer Therapies, UC Irvine Cardiology Grand Rounds

Other Teaching (Ongoing):

1996-Present - instructor for Epidemiology of Cardiovascular Diseases (Epi 240) course, Dept. of Epidemiology, UCLA School of Public Health, Los Angeles, CA (spring)

2010, 2012-present – co-course director for Chronic Disease Epidemiology and Prevention (Epi 275/232), Dept. of Epidemiology, UC Irvine spring)

1988- Present - Instructor for Biological Sciences 199 Research Elective - supervision of multiple students participating in ongoing independent cardiovascular epidemiologic research/data analysis projects and clinical trials, including patient case manager responsibilities.

1992 - 2004, Guest lecturer, Biology 50 (Biology of Heart Disease)

1999- 2007 - Lecturer, Various Medical Student Courses, UC Irvine, including Mechanisms of Disease and Biochemistry Courses, Lectures on Preventing Heart Disease, Hypertension, Dyslipidemia.
1998-2006 – Guest lecturer, Minority Biological Research Program course
2006 - 2008 Guest lecturer (coronary calcium), UCI-Toshiba CT Training Course, Division of Cardiology, University of California, Irvine
2009- present Co-director, Cardiovascular Diseases Summer School, European Center for Peace and Development (multi-day course held annually in Montenegro for Balkan region physicians).

Other Lectures: Community Hospitals and Other Non-Academic Institutions:

July 1994 - Cardiology Division, Saddleback Memorial Medical Center
March 1996 - American Diabetes Association-sponsored Southern California Diabetes Research Symposium , Newport Beach, CA
November 1996 - Arno A. Roscher, M.D. 27th Annual Symposium, Granada Hills Community Hospital
January 1997 - Alhambra Community Hospital (antioxidants), Alhambra, CA
January 1997 - Parke-Davis Lipid Preceptorship (risk factors), Orange, CA
February 1997 - Long Beach Community Hospital (women and heart disease), Long Beach, CA
February 1997 - Riverside Community Hospital (antioxidants), Riverside, CA
September 1997 - Northridge Community Hospital (lipids/antioxidants), Northridge, CA
November 1997 - Kaiser Permanente Regional Diabetes Symposium (lipid clinical practice guidelines), Universal City, CA
November 1997 - Preventive Medicine Grand Rounds (lipids/EBCT), Rush Medical College, Chicago, IL
April 1998 – Western University, School of Pharmacy (CVD risk factors), Pomona, CA
September 1998 – Menifee Valley Medical Center (Lipids), Sun City, CA
Sierra Vista Hospital (Prevention/Reversal CAD), San Luis Obispo, CA
February 1999 – West Hills Hospital and Medical Center (Lipids), West Hills, CA
September 1999 - Placentia-Linda Hospital (Antioxidants), Placentia, CA
October 1999 - Women's Health Issues (Preventing Heart Disease in Women), Kaiser Permanente, Stockton, CA
January 2000 - Dietary Factors and Antioxidants; Lipids and Other Preventive Strategies, Van Nuys Presbyterian Hospital, Van Nuys, CA
August 2000 – Lipid Management – Kaiser Permanente Los Angeles, OBGYN Grand Rounds
September 2000 – Dietary Management and Lipids – Roseville Hospital, Roseville, CA
October 2000 – Preventing Heart Disease in Women – Northridge Hospital, Van Nuys, CA
February 2001 – Lipid-Lowering: Clinical Trial Update and Management – West Hills Hospital, West Hills, CA
March 2001 – Nutrition, Antioxidants, and Coronary Heart Disease/Obesity – Obesity and Eating Disorders: Physical and Mental Challenges in Management, Orlando, FL

April 2001 – Preventing Heart Disease in Women, South Coast Medical Center, Laguna Beach, CA
May 2001 – Lipid-Lowering Update – Montebello Hospital, Montebello, CA
June 2001 – Ethics of Lipid-Lowering – St Joseph Hospital, Orange, CA
June 2001 – Co-Chair, moderator, Lipid and Atherosclerosis Working Group Symposium, Foundation for the Prevention of Cardiovascular Disease and Stroke, Santa Monica, CA
September 2001 – Surrogate Measures of Atherosclerosis, Cardiology Grand Rounds, St John Hospital, Detroit
January 2002 – Lipid management, JFK Memorial Hospital, Indio, CA
March 2002 – Lipid management, Downey Community Hospital, Downey, CA
May 2002 – Prevention of Cardiovascular Disease – Beverly Hospital, Montebello, CA
June and July 2002 – Hypertension Management—Cardiovascular and Renal Effects of ARBS / Implications of the PRIME Data – Santee, CA, Bakersfield, CA, Redding, CA, and Beverly Hills, CA
September 2002 – Update on Lipid Management – JFK Memorial, Indio, CA
September 2002 – Co-Chair, moderator, Lipid and Atherosclerosis Working Group Symposium on diabetes, metabolic syndrome, and cardiovascular disease, Foundation for the Prevention of Cardiovascular Disease and Stroke, Dana Point, CA
October 2002 – Prevention of Cardiovascular Disease – South Coast Medical Center, Laguna Beach, CA
October 2002 – The CHD Risk Equivalent Patient – Las Vegas Medical Center, Las Vegas, NM
March 2003 – Lipid management – Lancaster Medical Center, Lancaster, CA
May 2003 – Hypertension Clinical Trials Update and Management – St. Johns Hospital and Medical Center, Detroit, MI
July 2003 – Hypertension Update, St Francis Medical Center, Lynwood, CA
August 2003 – Hypertension Update and Management (Sanofi), Anchorage, AK
August 2003 – Prevention of Cardiovascular Disease, Alaska Family Practice Residence, Anchorage, AK
August 2003 – Lipid management tutorial, Astra-Zeneca, Laguna Niguel, CA
September 2003 – Crestor luncheon roundtables, Astra-Zeneca, Rancho Santa Margarita and Tustin, CA
October 2003 – Lipid management, Astra-Zeneca, Talbert Medical Group, Fountain Valley and Huntington Beach, CA
October 2003 – Lipid management, Apollo Grand Rounds, Alaska Family Practice Residency, Anchorage, AK
December 2003 - Lipid management, Cal-Optima, Orange, CA
December 2003 and January 2004– Crestor luncheon programs, Astra Zeneca, Bristol Park Medical Group, Irvine, CA and Irvine Medical Center, Irvine, CA
March 2004 – Surrogate Measures of Atherosclerosis – Flemings, Newport Beach, CA
March 2004 – Coronary Calcium and Risk Assessment – Medical Grand Rounds, Rancho Los Amigos Medical Center, Downey, CA
May 2004 - Metabolic Syndrome and Dyslipidemia – Medical Grand Rounds, Rancho Los Amigos Medical Center, Downey, CA

May 2004 – Coronary Calcium and Risk Assessment – Preventive Cardiology Symposium, University of Iowa, Iowa City, IA
June 2004 – New Concepts in Preventing Heart Disease and Hypertension Management – Spinal Cord Injury Conference, Long Beach, CA
June 2004 – Metabolic syndrome, diabetes, and cardiovascular disease. St Joseph's Heritage Medical Group, Orange, CA
July 2004 – Hypertension and Dyslipidemia in the Metabolic Syndrome. Arrowhead Regional Hospital, Colton, CA
September 2004 – Hypertension, dyslipidemia, and the metabolic syndrome in prevention of cardiovascular disease. Saddleback Memorial Hospital, Laguna Hills, CA
October 2004 – New Concepts in Preventive Cardiology, Cardiology Update Symposium, Long Beach Memorial Hospital
October 2004 – Coronary Calcium Evaluation and Cardiovascular Risk – UC Davis Cardiology Conference, Sacramento, CA
November 2004 – Hypertension, dyslipidemia, and the metabolic syndrome. West Anaheim Medical Center, Anaheim, CA
November 2004 – Metabolic syndrome: clinical management in the prevention of cardiovascular disease. Spaghetinni, Seal Beach, CA
December 2004 – Metabolic syndrome and cardiovascular disease. Dept. of Preventive Medicine seminar, UC San Diego, La Jolla, CA
December 2004 – Women and Heart Disease. Los Alamitos Medical Center, Los Alamitos, CA
January 2005 – Hypertension, Dyslipidemia, and the Metabolic Syndrome. Little Company of Mary Hospital, Torrance, CA
March, June, July 2005 – Dyslipidemia, metabolic syndrome, and workup of suspected coronary disease lectures for Johns Hopkins CME at Sea Program, Western Caribbean, Eastern Caribbean, and Alaska
July 2005 – Metabolic syndrome: evaluation, risk assessment and treatment, Medical Grand Rounds, University Medical Center, Las Vegas, NV
October 2005- October 2007 – Metabolic Syndrome Risk Assessment and Clinical Management Dinner Roundtables: Long Beach (October 2005), Santa Monica (October 2005), Sacramento (April 2006), Riverside (June 2006), Rancho Mirage (December 2006), Anchorage (October 2007).
March 2006 and June 2006– Introduction to the Endocannabinoid System and Cardiometabolic Risk, Pasadena, CA (March) and Riverside, CA (June)
April 2006 – Lipid-Lowering and Other Strategies for Preventing Heart Disease
April 2006 – Optimizing Lipid Management for Cardiovascular Disease Prevention: Implications of Recent Clinical Data, Costa Mesa, CA
September 2006 – Metabolic Syndrome and Cardiovascular Disease: Cardiology Cutting Edge Symposium, Long Beach Memorial Hospital, Long Beach, CA
February 2007 – Metabolic Syndrome and Cardiovascular Disease. Dinner Program (Takeda) Albuquerque, NM
February 2007 – Subclinical Atherosclerosis. Cardiology Grand Rounds, Division of Cardiology, Department of Internal Medicine, University of New Mexico, Albuquerque, NM.

March 2007 – Hypertension New Concepts in Management – Monterey Park Hospital, Monterey Park, CA and Rancho Springs Hospital, Murrieta, CA
 May 2007 – Metabolic Syndrome, Diabetes, TZDs, and Cardiovascular Disease – lectures in Everett, Bellevue, Seattle, and Tacoma, WA
 June 2007 – Hypertension, Kaiser Permanente Medical Center, Harbor City, CA
 September 2007 – Hypertension, San Pedro Hospital, San Pedro, CA
 October 2007 and March 2008 – The Power to Know: Clinical Update on Diabetes, Los Angeles, CA and Santa Ana, CA
 January 2008 – Metabolic Syndrome, St Jude Medical Center, Fullerton, CA
 February 2008 – Hypertension Management, Sharp Grossmont Hospital, La Mesa, CA
 2007 – 2008: Clinical Update: Recent Findings Related To TZD Therapy, San Pedro, CA (Sept. 2007), Westminster, CA (Oct 2007), Phoenix and Peoria, AZ (Dec 2007), Long Beach (Jan 2008), Phoenix and Globe, AZ (Feb 2008), Fullerton (Feb 2008), Orange (March 2008), Palm Desert (June 2008), Downey (July 2008), Honolulu (August 2008).
 April 2008 – Hypertension Management and Diovan, Diovan HCT, and Exforge, Guangzhou, China
 April 2008 - Hypertension guidelines and management – Rural Yunnan Hypertension Conference, Kunming, China
 July 2008 – Metabolic Syndrome, Fountain Valley Hospital
 October 2008 – Metabolic Syndrome and CVD, UC Davis Medical Center, Cardiology Grand Rounds
 December 2008 – Dyslipidemia, Irvine Medical Center, Irvine, CA
 February 2009 – Metabolic Syndrome, Good Samaritan Hospital, Los Angeles, CA
 February 2009 – HDL-Cholesterol / Metabolic Syndrome, Dick Butkus Cardiovascular Symposium, Dana Point, CA
 March 2009 – Cardiometabolic Risk – Marina Del Rey, Hospital
 April 2009 – Dual Defect in TZD Therapy (Takeda), United Doctors Assn., Costa Mesa, CA
 May 2009 – Prevention and Management of Hypertension, American Society of Hypertension, San Francisco (moderator of panel with Chinese Hypertension League)
 June 2009 – Screening for Subclinical Atherosclerosis – Mission Hospital, Mission Viejo, CA and Lakewood Medical Center, Lakewood CA
 June 2009 – Hypertension Clinical Trials and Management – Alvarado Hospital, San Diego, CA
 June 2009 – Cardiovascular Novel Risk Factors – Tarzana Hospital, Tarzana, CA
 September 2009 – Design and Evaluation of Outcomes Research and Comparative Effectiveness Studies, 7th Annual Clinical Research Symposium, Desert Oasis Healthcare, Palm Desert, CA
 September 2009 – Metabolic syndrome, hypertension, and CVD – Fountain Valley Hospital, Fountain Valley, CA
 October 2009 – The Convergence of Diabetes and Cardiovascular Disease, ACC, Beverly Hills Hotel
 October 2009 – Metabolic Syndrome and Cardiovascular Disease – Polymer Technology Systems / Cardiochek, Indianapolis, IN

October 2009 – Lectures on Global Risk Assessment in Diabetes and Subclinical Atherosclerosis, 1st Annual Orange County Symposium on Cardiovascular Disease Prevention through Clinical Lipidology, Anaheim, CA
April 2010 – Diabetes and CVD – Fountain Valley Hospital, Fountain Valley, CA
May 2010 – Metabolic Syndrome, Diabetes, and CVD – Cardiacare Live CME Program, Johns Hopkins University
May 2010 – Metabolic Syndrome, Diabetes, and CVD, Monterey Park Hospital, Monterey Park, CA
August 2010 – USC Symposium on Global Cardiovascular Disease, Los Angeles, CA
September 2010 – Dyslipidemia Management, Lakewood Hospital, Lakewood, CA
September 2010 – Prevention of Cardiovascular Disease, World Heart Day, Yuhang/Hangzhou, CHINA
October 2010 – Subclinical Atherosclerosis; Cardiovascular Disease Prevention Through Clinical Lipidology: A Focus on Reducing Cardiometabolic Risk, 2nd Orange County Symposium, Anaheim, CA
April 2011 – Imaging for Prevention, Menifee Valley Medical Center, Menifee, CA
October 2011 – Subclinical Atherosclerosis; Cardiovascular Disease Prevention Through Clinical Lipidology: Unmet Needs, Management Challenges, and the Difficult Patient. Anaheim, CA
October 2012 – Invited speaker/co-chair, 4th Orange County Symposium on Cardiovascular Disease Prevention Through Clinical Lipidology, Newport Beach, CA
May 2013 – Dyslipidemia and CVD – Lakewood Hospital, Lakewood, CA
May 2013 – Prevention of CVD – West Anaheim Medical Center, West Anaheim, CA
November 2013 – Cardiovascular Risk Assessment and HDL-C and CVD (Pro): 5th Orange County Symposium on Cardiovascular Disease Prevention and Clinical Lipidology, Anaheim, CA
January 2014 – Interpreting the ACC/AHA Prevention Guidelines – Kowa Dinner Program, Scottsdale, AZ
February 2014 – Interpreting the ACC/AHA Cholesterol Management and Prevention Guidelines – Grand Rounds, Good Samaritan Hospital, Los Angeles
November 2014 – Interpreting the ACC/AHA Cholesterol Management and Prevention Guidelines – Grand Rounds, Desert Valley Hospital, Victorville, CA
December 2014 - Interpreting the ACC/AHA Cholesterol Management and Prevention Guidelines, Dignity Health, Redding, CA.
February 2015- Dyslipidemia Implications of Clinical Trials and Newer Therapies, Little Company of Mary Hospital, Torrance, CA
February 2016 – ACC AHA Cholesterol Management Guidelines, Valley Heart Associates / ACC District Meeting, Modesto, CA
April 2016 – Addressing CVD Residual Risk, Cardiology Symposium, Hemet Valley Hospital
February 2016 – present, Praluent PCSK9 monoclonal antibody therapy lectures (various locations)
July 2016 – ACC AHA CVD Prevention Guidelines, La Palma Hospital, La Palma, CA
August 2016 – CVD Residual Risk Reduction, Desert Valley Hospital, Victorville, CA

September 2016 – ACC AHA Prevention of CVD Guidelines – Placentia Linda Hospital, Placentia, CA
February 2017 – Dyslipidemia Management and Newer Therapies – Anaheim Memorial Hospital, Anaheim, CA
February 2017 – PCSK9 Monoclonal Antibody Therapy for Dyslipidemia – Huntington Memorial Hospital, Huntington Beach, CA
February 2017 – PCSK9 Monoclonal Antibody Therapy for Dyslipidemia – Placentia Linda Hospital, Placentia, CA
April 2017 - PCSK9 Monoclonal Antibody Therapy for Dyslipidemia – Good Samaritan Hospital, Los Angeles, CA
April 2017 - PCSK9 Monoclonal Antibody Therapy for Dyslipidemia – St Jude Hospital, Fullerton

July 2017 – ACC AHA Cholesterol Management Guidelines and Newer Therapies – Covina Hospital, Covina, CA
October and December 2017 – Basic Education in Triglyceridemia Grand Rounds, Hemet Valley Hospital, Hemet, CA, Valley Presbyterian Hospital, Van Nuys, CA, and Rutgers University Medical Center, Rutgers, NJ
December 2017 – ACC/AHA Prevention of Cardiovascular Disease Guidelines and Newer Therapies, Fountain Valley Hospital, Fountain Valley, CA
July and August 2018 - ACS Lipid Management, Sanofi Pharmaceuticals, Sacramento and Newport Beach, CA
September 2019 – Northern Arizona Healthcare Cardiology Symposium
January 2019 – New Approaches to Manage ASCVD Risk, St Rose Hospital, Hayward, CA
February 2019 – New Approaches for Preventing Cardiovascular Disease, Fountain Valley Regional Hospital
March 2019 - New Approaches to Manage ASCVD Risk, UC Davis Medical Center
March 2019 - New Approaches to Manage ASCVD Risk, Good Samaritan Medical Center
April 2019 – Lectures on dyslipidemia, hypertension, diabetes, and New Approaches to Manage ASCVD Risk, Caremore Cardiology Symposium, Tucson, AZ
May 2019 - New Approaches to Manage ASCVD Risk, Stanford Center for Disease Prevention, Stanford, CA
May 2019 – Lipid Management in High Risk Populations, Sanofi Pharmaceuticals, Burlingame, CA
August 2019 – Vascepa and the REDUCE-IT Trial, Amarin Pharma, Anaheim, CA
December 2019 – ASCVD in High Risk Populations, Sanofi Pharmaceuticals, Seal Beach, CA
December 2019 - PCSK9 Inhibitors in Clinical Practice, Lindquist Institute, Seal Beach, CA

Since 2010 – Convener, Preventive Cardiology of Orange County (PCOC) discussion groups including key thought leaders in preventive cardiology and related areas.

Community and Other Service:

1988, 1992-1997 - Research preceptor for American Heart Association California Affiliate summer student fellowship
1990 - Advisory board member, California Low-Income Minority Adolescent Nutrition Education Program
1991 - Member, Asian/Pacific Islander Task Force, State Department of Health
March 1991 - UCI Medical Center Heart Month health fair cholesterol screening
May 1991 - Speaker, Dietary factors and cholesterol status of Orange County School Children, American Heart Association, Irvine, CA
December 1991 - Member, California Senate Hearing Panel on Youth Physical Education and Fitness
January 1992 - Member, Investigative Group Fellowship Study Section, Greater Los Angeles Affiliate, American Heart Association
March 1992 - Speaker, Statistical Methods in Evaluation, Asian-Pacific Islander Tobacco Control Coalition
November 1994- Present - UCI Women's Health Initiative Community Advisory Board
November 1994 - Speaker, Ethnic Issues in Cardiovascular Disease Prevention, Pan-Asian Health Conference, Irvine, CA
April 1995 - UCI College of Medicine Health Fair
May 1995 - Anaheim Senior Health Fair
September 1995 - Present - Member, Health Advisory Council, KOCE 50 TV
June 1996 - Presenter, Ideas for Action Roundtable, American Heart Association Delegate Assembly, Studio City, CA
October 1996 - Irvine Medical Center Health Fair
January 1997 - American Heart Association Women's Council, Newport Beach, CA
April 2001 - American Association of University Women, Costa Mesa, CA
Ongoing since 2001 - Blood pressure screening / cardiovascular risk assessment at Native American Pow-Wows, in collaboration with Association for American Indian Physicians
June 2012, October 2013, October 2014 - Volunteer, American Heart Association, Community health fair, Union Bank, Westminster, CA
February 2017 - Volunteer for Pacific Lipid Association / AHA screening program, Native Health Center, Phoenix, AZ

Other:

Member, Sierra Club (since 1978)
Life Member, Yosemite Association
Volunteer, Ocean Institute, Dana Point, CA (2006-2007)

Community lectures / seminars on coronary risk factors and prevention of coronary heart disease:

Rehabilitation Institute, Orange (October 1990), Inn at the Park Retirement Inn, Irvine (March 1991 and July 1995), Calif. State Employees Assn., Santa Ana (April 1991), Fluor Corporation, Irvine (May 1991), Gardena Rotary Club, Gardena (August 1991), Mesa Consolidated Water District, Costa Mesa (September 1991), Leisure World Sunday Discussion Club, Laguna Hills (March 1992), Miracle Mile Lions Club (April 1992), Women For Orange County (November 1992), Buena Park Doctors Hospital retreat, Dana Point (November 1992), American Association of University Women, Irvine (January 1993), Regents Point Retirement Inn (April 1993), Community Seminars for the UCI Heart Disease Prevention Program (July 1993 and September 1993), Feltman Memorial Lecture Series, Leisure World, Laguna Hills (August 1993), State Department of Health Services Preventive Health Care for the Aging (May 1994), Orange County Office Supervisors, Santa Ana (July 1994), Leisure World Academicians, Laguna Hills (January 1995), Orange County Jewish Federation (July 1995), Vietnamese Community of Orange County (August 1995 & February 1996), UCI Heart Disease Prevention Program Fireside Chat Series (September and October 1995, April, May, and November 1996), Friendly Hills Senior Center, Orange (November 1995), Martin Luther Hospital, Anaheim (Heart Disease in Women)(November 1995), Costa Mesa Senior Center (February 1996), Saddleback College Distinguished Guest Lecture (March 1996 and January 1999), Buena Park Senior Center (June 1996), Orange Senior Center (February 1997), UC Health Systems community talk (February 1998 and February 1999), Kimberly-Clark (July 1998), AETNA US Healthcare (February 1999), Boeing Anaheim, CA (February 2002), Taft Elementary School, Orange, CA (January 2003), Tustin Senior Center (May 2003), Orange Senior Center (February 2005), Oasis Senior Center (April 2005), University Club (October 2005), Dana Point Women's Club (February 2006), University Club (October 2007), University High School (Irvine, CA)(March 2008), UC Irvine Heart Month employee lectures (UCI campus and UCIMC, February 2009), Malcom Elementary School, Laguna Niguel, CA (February 2011), American Heart Association, Orange County (December 2011), Squar Milner, Newport Beach (January 2012), Ageis Senior Center (February 2012), Osher Lifelong Learning Institute, Irvine, CA (March 2012), Sea Country Senior Center, Laguna Niguel (February 2013 and 2014)

Media Interviews:

Pediatric Dietary Intervention Study: ABC Eyewitness News, Los Angeles Times, Orange County Register (May 1990);

Physical Fitness Test Results: Orange County Register (October 1990);

Television Viewing and Pediatric Hypercholesterolemia (November 1990 to July 1992): American Heart Association, Los Angeles Times, CBS News This Morning, Capitol Radio (London), Daily Pilot (Newport Beach), KSCN radio, Springer Foreign News Service, American Health magazine, Prevention magazine, KCBS news;

Cholesterol Levels and Risk Post-Myocardial Infarction (October-November 1991): featured in USA Today, American College of Physicians, Physicians News Network, KCBS (San Francisco);

Coronary Calcium Screening and Coronary Heart Disease, Orange County Register (November 1992 and February 1994), Interviewed by and quoted in New York

Times (November 1995), Interviewed by and quoted in U.S. News & World Report (April 1996).

CHD Mortality Rates in Orange County (October 1996), Interviewed by KNBC TV, Orange County Register, and Los Angeles Times Orange County.

Cardiovascular Disease Incidence in Women in California (February 2000), Interviewed by the Los Angeles Times Orange County

Systolic hypertension (March 2001), interviewed by ABC News, CBS Radio News, Reuters, American Heart Association, article in Orange County Register

JNC-VII Hypertension Guidelines (May 2003), interviewed by and quoted in Orange County Register

Early detection of heart disease, interviewed for American College of Cardiology Cardiology "Cardiology" newsletter

Achieving Aggressive BP and Lipid Goals: Mission Impossible, interviewed by MedScape for webcast, May 2006.

CT Scanning, New York Times, October 2007

Cholesterol, statins, and heart disease, Los Angeles Times, December 2008

Cholesterol, Scientific American, August 2011

Interview on Childhood Cholesterol Screening and Management, American Heart Association Science News, March 2012

Preventive Cardiology Training Course, World Congress of Cardiology, featured in theHeart.Org April 2012

A Multiple Biomarker test for predicting CVD: Has its time arrived? Featured in theHeart.Org June 2012

Dyslipidemia residual risk, Reuters Healthcare, May 2013

Keeping a Healthy Heart, American Heart Association, Trinity Broadcasting Network, Tustin, CA, April 2015

Women and Heart Disease, KSBR Radio, Saddleback College, Mission Viejo, CA, January 2017

Professional Consultation:

Montebello Schools Physical Assessment Program (1989), Pomona Unified School District (1990-present), Cordis-Webster, Baldwin Park (1992-1995), PacifiCare Wellness Company (1993-1995), University Heart Imaging (1994), Medical Education Speakers Network (1998-present), Arnold & Porter / Brobeck, Phleger, & Harrison LLP (2001), Cedars-Sinai Medical Center, Los Angeles, CA (2001-2010), Sedgwick LLP (2005), Novartis Pharmaceuticals (2007), Polymer Technology Systems (2008), Scientific Advisory Board, Monavie, Inc. (2009-present), Re-Engineering Healthcare, Inc. (2009-Present), Abbot Pharmaceuticals (2010), TA Lifesciences (2010-present), Ronald Marron Law Offices (2011-present), St Jude Medical (2011-present), Aviiir (2012-2013), Quinn-Manuel Law Offices (2014-present), Amgen Pharmaceuticals (2014-present), Pfizer Pharmaceuticals (2015-present), Thomas Quinn LLP (2018)

RESEARCH SUPPORT

Current Research Support

NIH 1R01HL128801-01 Co-I (Shaista Malik, MD, PI) 7/2015-4/2020
SBHW-PREDICT (The role of Proteomics, gEnetics, and Directed Imaging using CT)

Amarin Corporation PI 05/2019-04/2020
US Population-Wide Impact of the REDUCE-IT Trial on Prevention of Cardiovascular Disease Events, Hospitalizations, and Mortality: the National Health and Nutrition Examination Survey

Novartis, Inc. PI 06/2019-05/2020
Relation of Lp(a) with Residual Atherosclerotic Cardiovascular Disease (ASCVD) Risk in Statin-Treated Adults with Known ASCVD

Past Research Support

Amarin, Inc. PI 9/2017-8/2019
Residual Hypertriglyceridemia in Statin-Treated US Adults: The National Health and Nutrition Examination Survey

Pfizer, Inc. PI 10/2016-8/2018
Cardiovascular Residual Risk and Risk Prediction in Diabetes Patients with and without Prior Statin Therapy and Cardiovascular Disease

Amgen, Inc. PI 9/2017-8/2018
Cardiovascular Disease Residual Risk and Predictors in Patients with Cardiovascular Disease With and Without Diabetes Mellitus on Statin Treatment in the AIM High Cohort

Boehringer-Ingelheim, Inc. PI 1/2018-12/2018
US Population-Wide Impact of the EMPA-REG OUTCOME Trial: the National Health and Nutrition Examination Survey

Gilead Sciences PI 6/2016-5/2017
Angina Symptom Burden and Patient Factors Related to Hospitalization and Revascularization: The Multinational Coronary CT Angiography Evaluation for Clinical

Outcomes: An International Multicenter Registry (CONFIRM)

Regeneron PI 10/2014-3/2016
Current Statin Use and Lipid Control by ACC/AHA Statin Eligibility Group

Gilead Sciences PI 4/1/2015-3/31/2016
Burden of Angina in Older Adults: Predictors, Prognosis, and Impact of Pre-Diabetes and Diabetes in the Cardiovascular Health Study

Amgen Pharmaceuticals PI 4/1/2015-3/31/2016
Cardiovascular Risk Profiles in Higher Risk Subjects Experiencing Cardiovascular Events Despite Statin Therapy: the Multiethnic Study of Atherosclerosis

Amgen Pharmaceuticals PI 2/2014-2/2015
Control of LDL-C, Lp(a) and Long-Term CVD Outcomes in Older High CVD Risk Adults.

Gilead Sciences PI 10/2013-9/2014
Angina Prevalence and Treatment, Risk Factor Control and Quality of Life in Persons with CHD with and without Diabetes: US National Health and Nutrition Examination Survey (NHANES) 2001-2010)

Bristol Myers Squibb PI 7/2013-6/2014
Cardiovascular Risk Factor Control in Diabetes Pooling Project

Regeneron Pharmaceuticals PI 9/2013-5/2014
Distribution of Lipids and Distance to Goals in US Adults on Statin Therapy 2009-2010

Bristol Myers Squibb PI 4/2010-8/2012
Assessment of Risk Factors and Diabetes Complications in Subjects with Type 2 Diabetes I the United States National Health and Nutrition Examination Survey (NHANES) 2003-2006

Merck & Co, Inc. PI 2/2011-11/2011
Gaps in Goal Attainment for LDL-C, Non-HDL-C, and Dyslipidemia and Use of Statins and Statin Combinations in High Risk US Adults 2007-2008

Novartis Pharmaceuticals PI 10/2009-12/2009
Global Cardiovascular Risk Associated with Hypertension and Extent of Treatment and Control According to Risk Group.

Forest Research Laboratories PI 10/2009 – 3/2010
Isolated Systolic Hypertension in U.S. Adults: Distribution, Cardiometabolic Risks, and Adequacy of Treatment.

2 R01 HL63963-04A1 NIH/ NHLBI (PI: Detrano) Co-PI 9/2007-8/2010
Long-Term Effects of Sub-clinical CAD on Cardiac Function.

NIH R01 HL072493091 Subcontract from Harbor-UCLA SubK PI 9/03-2/08
Aortic Calcium in the Multiethnic Study of Atherosclerosis (MESA)
Subcontract PI from 9/06 to 2/08: Robert Detrano, MD

NIH NO1-HC-95169 Subcontract from Harbor-UCLA SubK PI 9/06-8/08
Multiethnic Study of Atherosclerosis (MESA) Electron Beam CT Reading Center
Subcontract PI from 9/06-8/08: Robert Detrano, MD

Merck & Co, Inc., 2006-2007 PI 2007-2008
Prevalence of Low HDL-C and Hypertriglyceridemia, Goal Attainment, and Gaps in
Lipid-Lowering Treatment in U.S. Adults

Merck & Co, Inc. PI 2006-2007
Abdominal Obesity, the Spectrum of Cardiometabolic Risks, and Mortality from
Coronary Heart Disease, Cardiovascular Disease, and All Causes

Pfizer, Inc. PI 2005-2006
Combined Control of Lipids and Blood Pressure and Cardiovascular Events

Pfizer, Inc. PI 2004-2005
Prediction of CHD, CVD, and Total Mortality Associated with Combined Hypertension
and Dyslipidemia: Impact of C-Reactive Protein Levels in the NHANES III Follow-up
Study

Astra-Zeneca Co-I (John Zamarra, MD PI) 2003-2008
A Randomized, Double-Blind, Placebo-Controlled, Multicenter, Phase III Study of
Rosuvastatin (Crestor) 20 mg in the Primary Prevention of Cardiovascular Events Among
Subjects with Low Levels of LDL-Cholesterol and Elevated Levels of C-reactive Protein

Bristol Myers-Squibb PI 2005-2006
Extent of Blood Pressure Control in US Adult Treated Patients with Hypertension and in
Populations at Elevated CV Risk

Bristol-Myers Squibb Pharmaceutical Research Institute PI 2003-2004
Metabolic Syndrome and Diabetes: Inflammatory Aspects and Relation to
Cardiovascular and Peripheral Vascular Disease: An Analysis of NHANES IV, Cross-
sectional evaluation of likelihood of CVD and PVD in persons

Pfizer Pharmaceuticals PI 3/05 – 12/06
The Prevalence, Control, and Population Attributable Risk for Concomitant Hypertension
and Dyslipidemia in the US Population with and without Metabolic Syndrome, Diabetes,
and Cardiovascular Disease.

National Institutes of Health	PI	2001- 2003	CARDIA
Echocardiography Reading Center.			

NIH/NHBLI MESA Family CT Reading Center SubK PI 2003-2007; UCI Subcontract from Harbor-UCLA, Principal Investigator Robert Detrano, MD), National Institutes of Health (Principal Investigator: Jerome Rotter, MD, Cedars-Sinai) 2003-2007.

National Institutes of Health SubK PI 2001-2003
Epidemiology of Diabetes Interventions and Complications: Electron Beam CT Reading
Center (Principal Investigator, Robert Detrano, MD, Harbor-UCLA, Torrance, CA)

National Institutes of Health. CoPI (10% effort) 1994-2005 (N01-WH-4-2107) Women's Health Initiative (UC Irvine Clinical Center), (Frank Meyskens, PI and Allan Hubbell, MD, PI 2000-2005 approx.)

PUBLICATIONS

Peer-Reviewed:

1. Beckett WS, Wong ND. Effect of normobaric hyperoxia on the airways of normal subjects. *J Appl Physiol* 1988; 64: 1683-7.
2. Beckett WS, McDonnell WF, Wong ND. Tolerance to methacholine inhalation challenge in non-asthmatic subjects. *Am Rev Resp Dis* 1988; 1499-1501.
3. Wong ND, Cupples LA, Ostfeld AM, Levy D, Kannel WB. Risk factors for long-term coronary prognosis following initial myocardial infarction: the Framingham Study. *Am J Epidemiol* 1989; 130: 469-80.
4. Wong ND, Reading AR. Personality correlates of the Type A behavior pattern. *Pers Indiv Diff* 1989; 10: 991-6.
5. Wong ND, Levy D, Kannel WB. Prognostic significance of the electrocardiogram following Q-wave myocardial infarction. *Circulation* 1990; 81: 780-9.
6. Wong ND, Ming S, Zhou HY, Black HR. A comparison of Chinese and Western medical approaches for the treatment of mild hypertension. *Yale J Biol Med* 1991; 64: 79-87.
7. Davidson DM, Van Camp J, Bates RD, Bradley BH, Grannis L, Iftener CA, Kelly KA, Landry SM, Wong ND. Family history fails to predict the majority of children with high capillary blood total cholesterol. *J School Health* 1991; 61(2): 75-80.
8. Wong ND. La riduzione del colesterolo: sfruttare al massimo i benefici. Aggiornamenti in Cardiologia (Italian), December 1991, 24-5.
9. Wong ND, Wilson PWF, Kannel WB. Serum cholesterol as a risk factor post-myocardial infarction: The Framingham Study. *Ann Intern Med* 1991; 115: 687-93.
10. Wong ND, Bassin S, Deitrick R. Relationship of blood lipids to body composition and family medical history in an ethnically diverse school-age population. *Ethnicity and Disease* 1991; 1(4): 351-63.
11. Gardin JM, Wong N, Bommer W, Klopfenstein S, Smith VE, Tabatznik B, Siscovick D, Lobodzinski S, Anton-Culver H, Manolio TA. Echocardiographic

design of a multi-center investigation of free-living elderly subjects: the Cardiovascular Health Study. *J Am Soc Echo* 1992; 5: 63-72.

12. Wong ND, Hei TK, Qaqundah PY, Davidson DM, Bassin SL, Gold KV. Television viewing as a marker for pediatric hypercholesterolemia. *Pediatrics* 1992; 90(1): 75-9.
13. Ettinger WH, Wahl P, Manolio T, Tracy R, Kuller L, Borhani N, Bush T, Wong N, O'Leary. Lipoprotein lipids in older people: results from the Cardiovascular Health Study. *Circulation* 1992; 86: 858-69.
14. Goel M, Wong ND, Eisenberg H, Hagar J, Kelly K, Tobis JM. Risk factor correlates of coronary calcification as evaluated by ultrafast computed tomography. *Am J Cardiol* 1992; 70: 977-80.
15. Brundage BH, Detrano RC, Wong ND. Ultrafast computed tomography: imaging of coronary calcium in atherosclerosis. *Am J Cardiac Imaging* 1992; 6(4): 340-5.
16. Cupples LA, Gagnon DR, Wong N, Ostfeld A, Kannel WB. Pre-existing cardiovascular conditions and long-term prognosis following initial myocardial infarction: the Framingham Study. *Am Heart J* 1993; 125: 863-72.
17. Bild DE, Fitzpatrick A, Fried LP, Wong N, Haan MN, Lyles M, Bovill E, Polak JF, Schulz R. Age-related trends in cardiovascular morbidity and physical functioning in the elderly: the Cardiovascular Health Study. *J Am Geriatr Soc* 1993; 41: 1047-56.
18. Morris GS, Vo A, Bassin SL, Wong ND. Distribution and correlates of tobacco use in a Hispanic youth population. *J School Health* 1993; 63(9): 391-6.
19. Wong ND, Kowabunpat D, Vo A, Detrano R, Eisenberg H, Goel M, Tobis JM. Coronary calcium in asymptomatic men and women: relation to age and risk factors. *Am Heart J* 1994; 127: 422-30.
20. Wong ND, Vo A, Abrahamson D, Tobis JM, Eisenberg H, Detrano RC. Coronary artery calcium evaluation by ultrafast computed tomography: relation to clinical evidence of coronary artery disease. *Am J Cardiol* 1994; 73: 223-7.
21. Tell GS, Bild D, Borhani N, Kronmal R, Polak JF, Rutan G, Wong N. Correlates of seated blood pressure in community-dwelling older adults: the Cardiovascular Health Study. *Hypertension* 1994; 23: 59-67.
22. Wong ND, Kashyap ML. Dyslipidemia in the elderly: prevalence and implications for clinical management in the prevention of coronary artery disease (invited review). *Cardiology in the Elderly* 1994; 2: 348-54.

23. Olson CL, Chan E, Turner DS, Iravani M, Nagy M, Selam JL, Wong ND, Waxman K, Charles MA. Insulin antibody responses after long-term intraperitoneal insulin administration via implantable programmable insulin delivery systems. *Diabetes Care* 1994; 17(3): 169-76.
24. Selam JL, Kashyap ML, Gupta AK, Turner D, Wong ND, Lozano JL, Charles MA. Improvement in reverse cholesterol transport associated with programmable implantable intraperitoneal insulin delivery. *Metabolism* 1994; 43(6): 665-9.
25. Detrano RC, Wong ND, French WJ, Tang W, Georgiou D, Young E, Brezden OS, Doherty T, Brundage BH. Prevalence of fluoroscopic coronary calcific deposits in 1,461 high-risk asymptomatic subjects. *Am Heart J* 1994; 127(6): 1526-32.
26. Detrano RC, Wong ND, Tang W, French WH, Georgiou D, Young E, Brezden OS, Narahara KA, Brundage BH. Prognostic significance of cardiac cinefluoroscopy for coronary calcific deposits in asymptomatic high risk subjects. *J Am Coll Cardiol* 1994; 24(2): 354-8.
27. Gardin JM, Wong N, Half SL, Paynter J, Bellows S, Knoll M, Jamison B, Patterson M, Kloner RA. Acute cocaine administration induces ventricular regional wall motion and ultrastructural abnormalities in an anesthetized rabbit model. *Am Heart J* 1994; 128: 1117-29.
28. Wong ND, Gardin JM, Kurosaki T, Anton-Culver H, Roseman J, Giddin S. Echocardiographic left ventricular systolic function: distribution and factors affecting variability: the CARDIA Study. *Am Heart J* 1995; 129: 571-7.
29. Tang W, Detrano RC, Brezden OS, Georgio D, French WJ, Wong ND, Doherty TM, Brndage BH. Racial differences in coronary calcium prevalence among high-risk adults. *Am J Cardiol* 1995; 75(16): 1088-91.
30. Wong ND, Detrano R, Abrahamson D, Tobis JM, Gardin JM. Coronary artery screening by electron beam tomography: the facts, the controversy, and the future. *Circulation* 1995; 92: 632-36.
31. Gardin JM, Wagenknecht LE, Anton-Culver H, Flack J, Gidding S, Kurosaki T, Wong ND, Manolio TA. Relationship of cardiovascular risk factors to echocardiographic left ventricular mass in healthy young black and white adult men and women: the CARDIA study.; *Circulation* 1995; 92(3): 380-7.
32. Wong ND, Teng W, Abrahamson D, Willner R, Henein N, Franklin SS, Kashyap ML, Rosenzweig B, Kukes G, Detrano RC. Noninvasive tracking of coronary atherosclerosis by electron beam computed tomography: rationale and design of

- the felodipine atherosclerosis prevention study (FAPS) *Am J Cardiol* 1995; 76: 1239-42.
33. Xie X, Gidding SS, Gardin JM, Bild DE, Wong ND, Liu K. Left ventricular diastolic function in young adults: the CARDIA study. *J Am Soc Echo* 1995; 8: 771-3
34. Teng W, Wong ND, Abrahamson D, Gardin JM. Relation of electron beam computed tomography (EBCT) screening for coronary calcium to cardiovascular risk and disease: a review. *Coronary Artery Disease* 1996; 7: 383-9 .
35. Wang S, Detrano RC, Tang W, Doherty T, Puentes G, Wong N, Brundage BH. Detection of coronary calcium with electron beam computed tomography: evaluation of inter-examination reproducibility and comparison of three image acquisition protocols. *Am Heart J* 1996; 132: 550-558.
36. Wong ND, Detrano RC, Diamond G, Rezayat C, Mahmoudi R, Chong C, Tang W, Puentes G, Kang X, Abrahamson D. Does coronary artery screening by electron beam computed tomography motivate healthy lifestyle behaviors? *Am J Cardiol* 1996; 78: 1220-3.
37. Wong ND, Gardin JM. Noninvasive assessment of and newer therapies for influencing atherosclerosis progression and regression. *Antiatherosclerotic Agents: Investigational Drugs Research Alert* 1997; 2(4): 141-8.
38. Gardin JM, Arnold A, Gottdiener JS, Wong ND, Fried LP, Klopfenstein HS, O'Leary DH, Tracy R, Kronmal R. Left ventricular mass in the elderly: the Cardiovascular Health Study. *Hypertension* 1997; 29(5): 1095-1103.
39. Franklin SS, Gustin W, Wong ND, Larson MG, Weber MA, Kannel WB, Levy D. Hemodynamic patterns of age-related change in blood pressure: the Framingham Heart Study. *Circulation* 1997; 96: 308-15.
40. Detrano RC, Wong ND, Doherty TM, Shavelle R. Prognostic significance of coronary calcific deposits in asymptomatic high-risk subjects. *Am J Med* 1997; 102: 344-9.
41. Secci A, Wong N, Tang W, Wang S, Doherty T, Detrano R. Prognostic significance of cardiac cinefluoroscopy for coronary calcific deposits in asymptomatic high-risk subjects: three year follow-up. *Circulation* 1997; 96: 1122-9.

42. Kasaoka S; Tobis JM; Akiyama T; Reimers B; Di Mario C; Wong ND; Colombo A. Angiographic and intravascular ultrasound predictors of in-stent restenosis. *J Am Coll Cardiol* 1998; 32(6):1630-5.
43. Doherty TM, Wong ND, Shavelle RM, Teng W, Detrano RC. Coronary heart disease deaths and infarctions in people with little or no coronary calcium. *Lancet* 1999; 353: 41-42.
44. Hosobuchi C, Rutassee L, Bassin SL, Wong ND. Efficacy of acacia, pectin, and guar gum-based fiber nutrient supplementation in the control of hypercholesterolemia. *Nutrition Research* 1999; 19: 643-649.
45. Detrano RC, Wong ND, Doherty TM, Shavelle RM, Tang W, Doherty TM, Ginzton LE, Budoff MJ, Narahara KA. Coronary calcium does not accurately predict near-term future coronary events in high-risk adults. *Circulation* 1999; 99: 2633-2638.
46. Franklin SS, Khan SA, Wong ND, Larson MG, Levy D. Is pulse pressure useful in predicting risk for coronary heart disease? The Framingham Heart Study. *Circulation* 1999; 100: 354-360.
47. Yang T, Doherty TM, Wong ND, Detrano RC. Alcohol consumption, coronary calcium, and coronary heart disease events. *Am J Cardiol* 1999; 84: 802-6.
48. Golomb BA, Criqui MH, Detrano RC, Wong ND, Bundens WP, Mattrey RF, Denenberg JO. Noninvasive testing to detect subclinical cardiovascular disease: what is its role? *Prev Cardiol* 1999; 2 (suppl): 42-50.
49. Wong ND, Hsu JC, Detrano RC, Diamond G, Eisenberg H, Gardin JM. Coronary artery calcium evaluation by electron beam computed tomography: relation to new cardiovascular events. *Am J Cardiol* 2000; 86: 495-98.
50. Sikand G, Kashyap ML, Wong ND, Hsu JC. Dietitian intervention improves lipid values and saves medication costs in men with combined hyperlipidemia and a history of niacin noncompliance. *J Am Dietetic Assoc* 2000; 100: 218-224.
51. Wassertheil-Smoller S, Anderson G, Psaty BM, Black HR, Manson J, Wong ND, et al. Hypertension and its Treatment in Post-Menopausal Women: Baseline Data from the Women's Health Initiative. *Hypertension* 2000; 36: 780-9.
52. Franklin SS, Jacobs MJ, Wong ND, L'Italien G, Lapuerta P. Predominance of isolated systolic hypertension among middle-aged and elderly US Hypertensives – Analysis based on NHANES III. *Hypertension* 2001; 37: 869-74.

53. Franklin SS, Larson MG, Khan SA, Wong ND, Leip EP, Kannel WB, Levy D. Does the relation of blood pressure to coronary heart disease risk change with aging? The Framingham Heart Study. *Circulation* 2001; 103: 1245-9.
54. Gardin JM, McClelland R, Kitzman D, Lima JAC, Bommer W, Klopfenstein S, Wong ND, Smith VE, Gottdiener J. M-mode echocardiographic predictors of six- to seven-year incidence of coronary heart disease, stroke, congestive heart failure, and mortality in an elderly cohort (The Cardiovascular Health Study). *Am J Cardiol* 2001; 87(9):1051-7
55. Wong ND, Pio J, Valencia R, Thakral G. Distribution of C-Reactive Protein and its Relation to Risk Factors and Coronary Heart Disease Risk Estimation in the National Health and Nutrition Examination Survey (NHANES) III. *Prev Cardio* 2001; 4: 109-115.
56. Wong ND, Budoff MJ, Pio J, Detrano RC. Coronary calcium and cardiovascular event risk: evaluation by age- and gender-specific quartiles. *Am Heart J* 2002; 142: 456-9.
57. Wong ND. Surrogate measures of atherosclerosis and implications for evaluating cardiovascular risk. *Diabetes, Obesity, and Metabolism* 2003; 5: 73-80.
58. Wong ND, Thakral G, Franklin SS, L'Italien GJ, Jacobs MJ, Whyte JL, Lapuerta P. Preventing heart disease by controlling hypertension: impact of hypertensive subtype, stage, age, and sex. *Am Heart J* 2003 May;145(5):888-895
59. Wong ND, Sciammarella MG, Polk D, Gallagher A, Miranda-Peats R, Whitcomb B, Hachamovich R, Friedman J, Hayes S, Berman DS. The metabolic syndrome, diabetes, and subclinical atherosclerosis assessed by coronary calcium. *J Am Coll Cardiol* 2003; 41: 1547-53
60. Qu W, Le TT, Azen SP, Xiang M, Wong ND, Doherty TM, Detrano RC. Value of coronary artery calcium scanning for predicting coronary heart disease in diabetic subjects. *Diabetes Care* 2003; 26: 905-910.
61. Wilson PWF, Smith SC, Blumenthal RS, Burke GL, Wong ND. Task Force #4 – How do we select patients for atherosclerosis imaging? In: 34th Bethesda Conference: can atherosclerosis imaging techniques improve the detection of patients at risk for ischemic heart disease. *J Am Coll Cardiol* 2003; 41: 1898-1906.
62. Wong ND, Pio J, Franklin SS, L'Italien GJ, Kamath T, Williams R. Preventing coronary events by optimal control of blood pressure and lipids in patients with the metabolic syndrome. *Am J Cardiol* 2003; 91: 1421-26.

63. Manson, JE, Hsia J, Johnson KC, Rossouw JE, Assaf AR, Lasser NL, Trevisan M, Black HR, Heckbert, SR, Detrano R, Strickland OL, Wong ND, Crouse JR, Stein E, Cushman M for the Women's Health Initiative Investigators. Estrogen Plus Progestin and Risk of Coronary Heart Disease: Final Results From the Women's Health Initiative. *New Engl J Med* 2003; 349: 523-534.
64. Wong ND, Sciammarella M, Arad Y, Miranda-Peats R, Polk D, Hachamovich R, Friedman J, Hayes S, Daniell A, Berman DS. Relation of Thoracic Aortic and Aortic Valve Calcium to Coronary Artery Calcium and Risk Assessment. *Am J Cardiol* 2003; 92: 951-55.
65. Papademetriou V, Piller LB, Ford CE, Gordon D, Hartney TJ, Geraci TS, Reisin E, Sumner BM, Wong ND, Nwachuku C, Narayan P, Haywood J, Habib G for the ALLHAT Collaborative Group. Characteristics and lipid distribution of a large, high-risk hypertensive population: the lipid-lowering component of the Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). *Journal of Clinical Hypertension* 2003; 5: 377-84.
66. Fornage M, Boerwinkle E, Doris PA, Jacobs D, Liu K, Wong ND. Polymorphism of the Soluble Epoxide Hydrolase is associated with Coronary Artery Calcification in African-American subjects: The CARDIA Study. *Circulation*. 2004;109(3):335-9.
67. Wong ND. Detection of subclinical atherosclerosis: implications for evaluating cardiovascular risk (invited focused review). *ACC Journal Review* Mar 2004: 30-35.
68. Wong ND, Kawakubo M, LaBree L, Azen S, Xiang M, Zhuang N, Detrano R. Relation of coronary calcium progression and control of lipids according to National Cholesterol Education Program guidelines. *Am J Cardiol* 2004; 94: 431-436.
69. Malik S, Wong ND, Franklin SS, Kamath TV, L'Italien GJ, Pio JR, Williams R. Impact of the metabolic syndrome on mortality from coronary heart disease, cardiovascular disease, and all causes in United States adults. *Circulation* 2004; 110: 1245-1250.
70. Berman DS, Wong ND, Gransar H, Miranda-Peats L, Dahlbeck J, Hayes S, Friedman J, Polk D, Hachamovich R, Rozanski A. Relationship Between Abnormality on Stress Myocardial Perfusion SPECT and Extent of Atherosclerosis by Coronary Calcium Tomography In Patients Without Known Coronary Artery Disease. *J Am Coll Cardiol* 2004; 44: 923-930.
71. Fornage M, Lopez DS, Roseman JM, Siscovick DS, Wong ND, Boerwinkle E. Parental history of stroke and myocardial infarction predicts coronary artery calcification: The Coronary Artery Risk Development in Young Adults (CARDIA) study. *Eur J Cardiovasc Prev Rehabil* 2004;11:421-6

72. Carr JJ, Nelson JC, Wong ND, McNitt-Gray M, Arad Y, Jacobs DR, Sidney S, Bild DE, Williams OD, Detrano RC. Calcified Coronary Plaque Measurement with Cardiac CT in Population Based Studies: Standardized Protocol of the Multi-Ethnic Study of Atherosclerosis (MESA) and Coronary Artery Risk Development in Young Adults (CARDIA) Study. *Radiology* 2005; 234:35-43.
73. Wong ND. Intensified Screening and Treatment of the Metabolic Syndrome for Cardiovascular Risk Reduction (invited perspective). *Preventive Cardiology* 2005; 8: 47-54.
74. Franklin SS, Pio J, Wong ND, Larson MG, Leip EP, Vasan RS, Levy D. Predictors of the development of new onset diastolic and systolic hypertension: the Framingham Heart Study. *Circulation* 2005; 111(9):1121-7.
75. Malik S, Wong ND, Franklin SS, Pio J, Fairchild C, Chen R. Cardiovascular Disease in US Patients with Metabolic Syndrome, Diabetes, and Elevated C-Reactive Protein. *Diabetes Care* 2005; 28: 690-3.
76. Gardin JM, Iribarren C, Detrano RC, Liu K, Schreiner PJ, Loria CM, Wong ND. Relation of echocardiographic left ventricular mass, geometry, stress, and left atrial dimension with coronary calcium 10 years later in young adults. *Am J Cardiol* 2005; 95: 626-9.
77. Nelson JC, Detrano R, Kronmal RA, Carr JJ, McNitt-Gray MF, Wong N, Loria C, Goldin JG, Williams JG, Williams DO. Measuring coronary calcium on CT images adjusted for attenuation differences. *Radiology* 2005; 235: 403-14.
78. Kawakubo M, LaBree L, Xiang M, Doherty TM, Wong ND, Azen S, Detrano R. Race- Ethnic Differences in the Extent, Prevalence and Progression of Coronary Calcium. *Ethnicity and Disease* 2005; 15: 198-204.
79. Kop WJ, Berman DS, Gransar H, Wong ND, Miranda-Peats R, White MD, Shin M, Bruce M, Krantz DS, Rozanski A. Social network and coronary artery calcification in asymptomatic individuals. *Psychosomatic Med* 2005; 67: 343-52.
80. Wong ND, Rozanski A, Gransar H, Miranda-Peats R, Kang X, Hayes S, Shaw L, Friedman J, Polk D, Berman DS. Metabolic syndrome and diabetes are associated with an increased likelihood of inducible myocardial ischemia among patients with subclinical atherosclerosis. *Diabetes Care* 2005; 28: 1445-50.
81. Kim CK, McGorray SP, Bartholomew BA, Marsh M, Dicken T, Wassertheil-Smoller S, Curb JD, Oberman A, Hsia J, Gardin J, Wong ND, Barton B, McMahon RP, Sheps DS. Depressive symptoms and heart rate variability in postmenopausal women. *Arch Intern Med* 2005; 165: 1239-44.

82. Detrano RC, Anderson M, Nelson J, Wong ND, Carr JJ, McNitt-Gray M, Bild DE. Coronary calcium measurements: effect on CT scanner type and calcium measure on rescan reproducibility. *Radiology* 2005; 236(2):477-84.
83. Meyers CD, Wong N, Kashyap ML. Anticipating the evolution of clinical cholesterol guidelines: implications of recent statin intervention trials. *Future Cardiol* 2005; 1: 461-471.
84. Vu JB, Vu JD, Pio J, Malik S, Pio J, Franklin SS, Chen R, Wong ND. Risk of peripheral arterial disease associated with metabolic syndrome, diabetes, and elevated C-reactive protein. *Am J Cardiol* 2005;96(5): 655-8.
85. Jacobs MJ, Kleisli T, Pio J, Malik S, L'Italien GJ, Chen R, Wong ND. Prevalence and control of dyslipidemia among persons with diabetes in the United States. *Diab Res Clin Prac* 2005; 70:263-9.
86. Daniell AL, Wong ND, Friedman JD, Ben-Yosef N, Miranda-Peats L, Hayes SW, Kang X, Sciammarella MG, Yang L, Germano G, Berman DS. Concordance of Coronary Artery Calcium Estimates between MDCT and Electron Beam Tomography. *Am J Roetology* 2005; 185: 1542-5.
87. Wong ND. Cardiovascular risk assessment in persons with the metabolic syndrome, screening for subclinical disease, and implications for treatment. *Br J Diab Vasc Dis* 2005; 5: 305-314.
88. Knox S, Barnes A, Kiefe C, Lewis CE, Iribarren C, Matthews K, Wong ND, Whooley M. History of depression, race and cardiovascular risk in CARDIA. *J Intl Behav Med* 2006; 13: 44-50.
89. Berman DS, Hachamovich R, Shaw LJ, Friedman JD, Hayes SW, Thomson LE, Fieno DS, Germano G, Wong ND, Kang X, Rozanski A. Roles of nuclear cardiology, cardiac computed tomography, and cardiac magnetic resonance: Assessment of patients with suspected coronary artery disease. *J Nucl Med* 2006; 27: 74-82.
90. Wong ND. Screening and risk stratification of patients with the metabolic syndrome and diabetes. *Exp Rev Cardiovas Therap* 2006; 4(2): 181-90.
91. Myers CD, Moon Y, Ghanem H, Wong ND. Type of pre-existing lipid therapy predicts LDL-C response to exetimibe. *Ann Pharmacotherapy* 2006; 40: 818-823.
92. Katz R, Wong ND, Kronmal R, Takasu J, Shavelle DM, Probstfield JL, Bertoni AG, Budoff MJ, O'Brien KD. Features of the metabolic syndrome and diabetes mellitus as predictors of aortic valve calcification in the Multiethnic Study of Atherosclerosis. *Circulation* 2006; 113: 2113-9.

93. Dey D, Callister T, Slomka P, Aboul-Enein F, Nishina H, Kang X, Gransar H, Wong ND, Miranda-Peats R, Hayes S, Friedman JD, Berman DS. Computer-aided detection and evaluation of lipid-rich plaque on noncontrast cardiac CT. *Am J Roentgenol* 2006; 186 (6 suppl 2): S407-13.
94. Wong ND, Lopez V, Tang S, Williams GR. Prevalence, treatment and control of combined hypertension and hypercholesterolemia in the United States. *Am J Cardiol* 2006; 98: 204-208.
95. Meyers CD, McCarren M, Wong ND, Abaira C, Duckworth WC, Kashyap ML; VADT investigators. Baseline achievement of lipid goals and usage of lipid medications in patients with diabetes mellitus (the Veterans Affairs Diabetes Trial). *Am J Cardiol* 2006; 98: 63-65.
96. Wong ND, Gransar H, Shaw LJ, Polk D, Berman DS. Comparison of atherosclerotic calcification burden in persons with the cardiometabolic syndrome and diabetes. *J Cardiometabolic Syndrome* 2006; 1: 90-94.
97. Berman DS, Hachamovitch R, Shaw LJ, Friedman JD, Hayes SW, Thomson LEJ, Fieno DS, Germano G, Wong ND, Kang X, Rozanski A. Roles of nuclear cardiology, cardiac computed tomography, and cardiac magnetic resonance: noninvasive risk stratification and a conceptual framework for the selection of noninvasive imaging tests in patients with known or suspected coronary artery disease. *J Nucl Med* 2006; 47: 1107-1118.
98. Franklin SS, Barboza M, Pio J, Wong ND. Blood pressure categories, hypertensive subtypes, and the metabolic syndrome. *Hypertension* 2006; 24: 2009-2016.
99. Cleary PA, Orchard TJ, Genuth S, Wong ND, Detrano RC, Backlund J-Y, Zinman B, Jacobson A, Sun W, Lachin JM, Nathan DM. The effect of intensive glycemic treatment on coronary artery calcification in type 1 diabetic participants of the Diabetes Control and Complications Trial / Epidemiology of Diabetes Interventions and Complications (DCCT/EDIC) Study. *Diabetes* 2006; 55(12):3556-65
100. Wong ND. The metabolic syndrome and preventive cardiology: working together to reduce cardiometabolic risks. *Metab Syndrome Relat Disord* 2006; 4: 233-236.
101. Campbell CY, Nasir K, Wong ND, Blumenthal RS. Role of atherosclerosis assessment and other novel markers in the metabolic syndrome. *Metab Syndr Relat Disord* 2006; 4: 261-9.
102. Malik S, Lopez V, Chen R, Wu W, Wong ND. Undertreatment of Cardiovascular Risk Factors Among Persons with Diabetes in the United States. *Diabetes Research and Clinical Practice* 2007; 77: 126-133.

103. Berman DS, Shaw LJ, Hachamovitch R, Friedman JD, Polk DM, Hayes SW, Thomson LEJ, Germano G, Wong ND, Kang X, Rozanski A. Comparative Use of Radionuclide Stress Testing, Coronary Artery Calcium Scanning, and Noninvasive Coronary Angiography for Diagnostic and Prognostic Cardiac Assessment. *Seminars in Nuclear Medicine* 2007; 37: 2-16.
104. Rozanski AR, Gransar H, Wong ND, Shaw LJ, Miranda-Peats R, Polk D, Hayes SW, Friedman JD, Berman DS. Clinical outcomes after both coronary calcium scanning and exercise myocardial perfusion scintigraphy. *J Am Coll Cardiol* 2007; 49: 1352-61.
105. Lopez VA, Franklin SS, Tang S, Wong ND. Coronary heart disease events preventable by control of blood pressure and lipids in U.S. adults with hypertension. *J Clin Hypertens* 2007; 9: 436-443.
106. Bertoni, A, Wong, ND, Shea SS, Ma, S, Liu K, Preethi S, Jacobs DR Jr, Wu C, Saad M, Szklo M. Insulin Resistance, Metabolic Syndrome and Subclinical Atherosclerosis: The Multi-Ethnic study of Atherosclerosis (MESA). *Diabetes Care* 2007; 30: 2951-6.
107. Budoff MJ, Katz R, Wong ND, Nasir K, Mao SS, Takasu J, Kronmal R, Detrano RC, Shavelle DM, Blumenthal RS, O'Brien KD, Carr JJ. Effect of scanner type on the reproducibility of extracoronary measures of calcification: the Multiethnic study of Atherosclerosis (MESA). *Acad Radiol* 2007; 1043-1049.
108. Liang MTC, Bassin S, Dutto D, Braun W, Wong N, Pontello AM, Cooper DM, Arnaud SB. Bone mineral density and leg muscle strength in young Caucasian, Hispanic, and Asian women. *J Clin Densitometry* 2007; 10: 157-164.
109. Wong ND. Metabolic syndrome: cardiovascular risk assessment and management. *Am J Cardiovasc Drugs* 2007;7:259-72.
110. Rozanski A, Gransar H, Wong ND, Shaw LJ, Miranda-Peats R, Hayes SW, Friedman JD, Berman DS. Use of Coronary Calcium Scanning for Predicting Inducible Myocardial Ischemia: Influence of Patients' Clinical Presentation. *J of Nuclear Cardiology* 2007; 14: 669-79.
111. Smoller JW, Pollack MH, Wassertheil-Smoller S, Jackson RD, Oberman A, Wong ND, Sheps D. Panic attacks and risk of incident cardiovascular events among post-menopausal women in the Women's Health Initiative Observational Study. *Arch Gen Psych* 2007; 64: 1153-60.
112. Margolis KL, Piller LB, Ford CE, Henriquez MA, Cushman WC, Einhorn PT, Colon PJ Sr, Vidt DG, Christian R, Wong ND, Wright JT Jr, Goff DC Jr. Blood

- pressure control in Hispanics in the antihypertensive and lipid-lowering to prevent heart attack trial. *Hypertension* 2007; 50: 854-61.
113. Nasir K, Budoff MJ, Wong ND, Scheuner M, Herrington D, Arnett DK, Szklo M, Greenland P, Blumenthal RS. Family history of premature coronary heart disease and coronary artery calcification: Multi-ethnic Study of Atherosclerosis (MESA). *Circulation* 2007; 116(6):619-26.
114. Hoang KC, Le TV, Wong ND. Metabolic syndrome in East Asians. *J Cardiometab Syndrome* 2007; 2: 276-282.
115. Sarai M, Hartung D, Petrov A, Zhou J, Narula N, Isobe S, Fjuimoto S, Virmani R, Kolodgie F, Vanderheyden J-L, Reutelingsperger C, Hofstra L, Wong ND, Gupta S, Narula J. Broad and specific caspase inhibitor-induced acute repression of apoptosis in atherosclerotic lesions evaluated by radiolabeled annexin A5 imaging. *J Am Coll Cardiol* 2007; 50: 2305-12.
116. Van J, Pan J, Charles MA, Krauss R, Wong N, Wu X. Atherogenic lipid phenotype in a general group of subjects. *Arch Pathol Lab Med* 2007; 131: 1679-85.
117. Wong ND, Lopez VA, L'Italien G, Chen R, Kline S, Franklin SS. Inadequate control of hypertension in U.S. adults with cardiovascular disease comorbidities in 2003-2004. *Arch Intern Med* 2007; 167 (22): 2437-42.
118. Lakoski SG, Greenland P, Wong ND, Schreiner PJ, Herrington DM, Kronmal RA, Liu K, Blumenthal RS. Coronary calcium scores and risk of cardiovascular events in women classified as low-risk by Framingham Risk Score. *Arch Intern Med* 2007; 167 (22): 2437-42.
119. Detrano R, Guerci AD, Carr JJ, Bild DE, Burke G, Folsom AR, Liu K, Shea S, Szklo M, Bluemke DA, O'Leary DH, Tracy R, Watson K, Wong ND, Kronmal RA. Coronary calcium as a predictor of coronary events in four racial or ethnic groups. *N Engl J Med* 2008; 358: 1336-45.
120. Hoang K, Ghandehari H, Lopez VA, Barboza MG, Wong ND. Global coronary heart disease risk assessment of individuals with the metabolic syndrome in the U.S. *Diabetes Care* 2008; 31: 1405-9.
121. Black H, Davis B, Barzilay J, Nwachuku C, Bainbridge C, Marginean H, Wright J, Basile J, Wong ND, Whelton, P, Dart R, Thadani U. Metabolic and Clinical Outcomes in Non-Diabetic Individuals with the Metabolic Syndrome Assigned to Chlorthalidone, Amlodipine, or Lisinopril as Initial Treatment for Hypertension: A Report from the ALLHAT Study. *Diabetes Care* 2008; 31(2): 353-60.

122. Allison MA, Budoff MJ, Wong ND, Blumenthal RS, Schreiner PJ, Criqui MH. Prevalence and risk factors for subclinical cardiovascular disease in selected US Hispanic ethnic groups: the Multiethnic Study of Atherosclerosis. *Am J Epidemiol* 2008; 167: 962-9.
123. Wolak A, Gransar H, Thomson LEJ, Friedman JD, Hachamovitch R, Gutstein A, Shaw LJ, Polk D, Wong ND, Saouaf R, Hayes SW, Rozanski A, Slomka PJ, Germano G, Berman. Aortic size assessment by noncontrast cardiac computed tomography: normal limits by age, gender, and body surface area. *J Am Coll Cardiol Img* 2008; 1: 156-63.
124. Takasu J, Katz R, Nasir K, Carr JJ, Wong N, Detrano R, Budoff MJ. Relationships of thoracic aortic wall calcification to cardiovascular risk factors: The Multi-Ethnic Study of Atherosclerosis (MESA). *Am Heart J* 2008; 155: 765-71.
125. Ghandehari H, Kamal-Bahl S, Wong ND. Prevalence and Extent of Dyslipidemia and Recommended Lipid Levels in U.S. Adults With and Without Cardiovascular Co-morbidities: The National Health and Nutrition Examination Survey 2003-2004. *Am Heart J* 2008; 156: 112-9.
126. Michos ED, Vaidya D, Gapstur SM, Schreiner PJ, Golden SH, Wong ND, Criqui MH, Ouyang P. Sex hormones, sex hormone binding globulin, and abdominal aortic calcification in women and men in the multi-ethnic study of atherosclerosis (MESA). *Atherosclerosis* 2008; 200(2):432-8.
127. Lee HM, Le T, Lopez VA, Wong ND. The association of C-reactive protein to reduced forced vital capacity in a non-smoking U.S. population with metabolic syndrome and diabetes. *Diabetes Care* 2008 31: 2000-2002.
128. Gardin JM, Allebban Z, Wong ND, Sklar SK, Bess RL, Spence AM, Pershadsingh HA. Endothelial function and urine albumin levels among asymptomatic Mexican-Americans and Non-Hispanic Whites. *Cardiovascular Ultrasound* 2008; 6: 43.
129. Fujimoto S, Hartung D, Ohshima S, Edwards DS, Zhou J, Yalamanchili P, Azure M, Fujimoto A, Isobe S, Matsumoto Y, Boersma H, Wong N, Yamazaki J, Narula N, Petrov A, Narula J. Molecular imaging of matrix metalloproteinase in atherosclerotic lesions: resolution with dietary modification and statin therapy. *J Am Coll Cardiol* 2008; 52:1847-57.
130. Lee E, Candrilli SD, Roberts CS, Tang SS, Bassin S, Wong ND. Regional differences in the prevalence, treatment and control of hypertension and dyslipidemia in US urban Hispanic populations participating in health screening events. *Ethn Dis* 2008; 18: 409-14.

131. Hyder JA, Allison MA, Wong N, Apapa A, Lang TF, Sirlin C, Gapstur SM, Ouyang P, Carr J, Criqui MH. Association of coronary artery and aortic calcium with lumbar bone density. The MESA Abdominal Aortic Calcium Study. *Am J Epidemiol* 2009; 186-194.
132. Lloyd-Jones D, Adams R, Carnethon M, De Simone G, Ferguson B, Felgal K, Ford E, Furie K, Go A, Greenland K, Haase N, Hailpern S, Ho M, Howard V, Kissela B, Kittner S, Lackland D, Lisabeth L, Marelli A, McDermott M, Meigs J, Mozaffarian D, Nichol G, O'Donnel C, Roger V, Rosamond W, Sacco R, Sorlie P, Stafford R, Steinberger J, Thom T, Wasserthiel-Smoller S, Wong N, Wylie-Rosett J, Hong Y for the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart Disease and Stroke Statistics 2009 Update: A Report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. *Circulation* 2009; e21-e181.
133. Ghandehari H, Le V, Kamal-Bahl S, Bassin SL, Wong ND. Abdominal obesity and the spectrum of global cardiometabolic risks in United States adults. *International Journal of Obesity* 2009; 33(2):239-248.
134. Franklin SS, Lopez VA, Wong ND, Mitchell GF, Larson MG, Vasan RS, Levy D. Single versus combined blood pressure components and risk for cardiovascular disease: the Framingham Heart Study. *Circulation* 2009; 119: 243-250.
135. van den Borne SWM, Isobe S, Zandbergen R, Li P, Petrov A, Wong ND, Fujimoto S, Fujimoto A, Lovhaug D, Smits JFM, Daemen JAP, Blankesteijn WM, Reutelingsperger C, Zannad F, Narula N, Vannan MA, Pitt B, Hofstra L, Narula J. Molecular imaging for efficacy of pharmacologic intervention in myocardial remodeling. *J Am Coll Cardiol Img* 2009; 2: 187-98.
136. Katz R, Budoff MJ, Takasu J, Shavelle DM, Bertono A, Blumenthal RS, Ouyang P, Wong ND, O'Brien KD. Relationship of metabolic syndrome with incident aortic valve calcium and aortic valve calcium progression: the Multi-Ethnic Study of Atherosclerosis (MESA). *Diabetes* 2009; 58(4):813-9.
137. Budoff MJ, Nasir K, McClelland RL, Detrano R, Wong N, Blumenthal RS, Kondos G, Kronmal RA. Coronary calcium predicts events better with absolute calcium scores than age-sex-race/ethnicity percentiles. MESA (Multi-ethnic Study of Atherosclerosis). *J Am Coll Cardiol* 2009; 53: 345-52.
138. Budoff MJ, McClelland RL, Chung H, Wong ND, Carr JJ, McNitt Gray M, Blumenthal RS, Detrano RC. Reproducibility of coronary artery calcified plaque with 64 MDCT: the Multiethnic Study of Atherosclerosis. *Am J Roentgenology* 2009; 192: 613-617.

139. Wong ND, Gransar H, Shaw L, Polk D, Moon JH, Miranda-Peats R, Hayes SW, Thomson LEJ, Rozanski A, Friedman JD, Berman DS. Thoracic aortic calcium versus coronary artery calcium for the prediction of coronary heart disease and cardiovascular disease events. *JACC Cardiovascular Imaging* 2009; 2: 319-26.
140. Malik S, Wong ND. Metabolic syndrome, cardiovascular risk and screening for subclinical atherosclerosis. *Expert Rev Cardiovasc Ther* 2009; 7: 273-80.
141. Lee HW, Chung SJ, Lopez VA, Wong ND. Association of Forced Vital Capacity and Total Mortality in U.S. Adults with Metabolic Syndrome and Diabetes. *Chest* 2009; 136(1):171-6.
142. Kesarwani M, Perez A, Lopez VA, Wong ND, Franklin SS. Cardiovascular comorbidities and blood pressure control in stroke survivors. *J Hypertens* 2009; 27: 1056-63.
143. Allen RW, Criqui MH, Diez Roux AV, Allison M, Shea S, Detrano R, Sheppard L, Wong ND, Stukovsky KH, Kaufman JD. Fine particulate matter air pollution, proximity to traffic, and aortic atherosclerosis. *Epidemiology* 2009; 20: 254-64.
144. Akasheh A, Wu Y, Li Y, Dustin LD, Wong ND, Gardin JM, Azen SP, Detrano RC. Association of blood pressure with left ventricular mass in untreated hypertensives in rural Yunnan province. *Am J Hypertens* 2009; 22: 730-4.
145. Hoffman EA, Jiang R, Baumhauer H, Brooks MA, Carr JJ, Detrano R, Reinhardt J, Rodriguez J, Stukovsky K, Wong ND, Barr RG. Reproducibility and validity of lung density measures from cardiac CT scans—the Multi-Ethnic Study of Atherosclerosis (MESA) Lung Study. *Acad Radiol* 2009; 16: 689-99.
146. Motoyama S, Sarai M, Harigaya H, Anno H, Inoue K, Hara T, Naruse H, Ishii J, Hishida H, Wong ND, Virmani R, Kondo T, Ozaki Y, Narula J. Computed tomography angiography characteristics of atherosclerotic plaques subsequently resulting in acute coronary syndrome. *J Am Coll Cardiol* 2009; 54: 49-57.
147. Berger JS, Brown DL, Burke GL, Oberman A, Kostis JB, Langer RD, Wong ND, Wassertheil-Smoller S. Aspirin use, dose, and clinical outcomes in postmenopausal women with stable cardiovascular disease: the Women's Health Initiative Observational Study. *Circ Cardiovas Quality and Outcomes* 2009; 2: 78-87.
148. Santo-Domongo NE, Orlov M, Wong ND, Kurosaki T, Reid CL, Hsieh AA, Gardin JM. Left ventricular end-systolic stress in young adults: distribution, risk factors, and relation to cardiovascular disease events. *Echocardiography* 2009; 26: 1006-11.

149. Allison MA, Budoff MJ, Naris K, Wong ND, Detrano R, Kronmal R, Takasu J, Criqui MH. Ethnic-specific risks for atherosclerotic calcification of the thoracic and abdominal aorta: the Multiethnic Study of Atherosclerosis. *Am J Cardiol* 2009; 104: 812-7.
150. Wong ND, Gransar H, Narula J, Shaw L, Moon JH, Miranda-Peats R, Rozanski A, Hayes SW, Thomson LEJ, Friedman JD, Berman DS. Myeloperoxidase, subclinical atherosclerosis and cardiovascular disease events. *JACC Cardiovascular Imaging* 2009; 2: 1093-9.
151. Shaw LJ, Polk DM, Kahute TA, Wong ND, Moon J, Miranda-Peats R, Rozanski A, Friedman JD, Hayes S, Thomson L, Berman DS. Prognostic accuracy of B-Natriuretic Peptide Measurements and Coronary Artery Calcium in Asymptomatic Subjects (from the Early Identification of Subclinical Atherosclerosis by Noninvasive Imaging Research [EISNER] Study). *Am J Cardiol* 2009; 104: 1245-50.
152. Postley J, Perez A, Wong ND, Gardin JM. Prevalence and distribution of sub-clinical atherosclerosis by screening vascular ultrasound in low and intermediate risk adults: the New York Physicians Study. *J Am Soc Echocardiography* 2009; 22: 1145-51.
153. Shaw LJ, Min JK, Budoff M, Gransar H, Rozanski A, Hayes SW, Friedman JD, Miranda R, Wong N, Berman DS. Induced cardiovascular procedural costs and resource consumption patterns following coronary artery calcium screening: results from the Early Identification of Subclinical Atherosclerosis by Noninvasive Imaging Research (EISNER) Study. *J Am Coll Cardiol* 2009; 54: 1258-67.
154. Berman DS, Rozanski A, Rana JS, Shaw LJ, Wong ND, Min JK. Screening for coronary artery disease in diabetic patients: A commentary. *J Nucl Cardiol* 2009; 16: 851-4.
155. Liang LR, Wong ND, Shi P, Zhao LC, Wu LX, Xie GW, Wu YF. Cross-sectional and longitudinal association of cigarette smoking with carotid atherosclerosis in Chinese adults. *Prev Med* 2009; 49: 62-7.
156. Rivera JJ, Nasir K, Katz R, Takasu J, Allison M, Wong ND, Barr RG, Carr JJ, Blumenthal RS, Budoff MJ. Relationship of thoracic aortic calcium to coronary calcium and its progression (from the Multi-Ethnic Study of Atherosclerosis [MESA]). *Am J Cardiol* 2009; 103: 1562-7.
157. Lloyd-Jones D, Adams RJ, Brown TM, Carnethon M, Dai S, De Simone G, Ferguson TB, Ford E, Furie K, Gillespie C, Go A, Greenlund K, Haase N, Hailpern S, Ho PM, Howard V, Kissela B, Kittner S, Lackland D, Lisabeth L, Marelli A, McDermott MM, Meigs J, Mozaffarian D, Mussolino M, Michol G, Roger V,

- Rosamond W, Sacco R, Sorlie P, Stafford R, Thom T, Wasserthiel-Smoller S, Wong ND, Wylie-Rosett J; on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart Disease and Stroke Statistics 2010 Update. A report from the American Heart Association. *Circulation* 2010; 121(7): e46-e215).
158. Gardin JM, Alleban Z, Wong ND, Sklar SK, Bess RL, Spence MA, Pershadsingh HA, Detrano R. Do differences in subclinical cardiovascular disease in Mexican Americans versus European Americans help explain the Hispanic paradox? *Am J Cardiol* 2010; 105: 205-9.
159. Hyder JA, Allison MA, Barrett-Conner E, Detrano R, Wong ND, Sirlin C, Gapstur SM, Ouyang P, Carr JJ, Criqui MH. Bone mineral density and atherosclerosis: The Multi-Ethnic Study of Atherosclerosis, Abdominal Aortic Calcium Study. *Atherosclerosis* 2010; 209: 283-9.
160. Dey D, Wong ND, Tamarappoo B, Nakazato R, Gransar H, Cheng VY, Ramesh A, Kakadiaris I, Germano G, Slomka PJ, Berman DS. Computer-aided non-contrast CT-based quantification of pericardial and thoracic fat and their associations with coronary calcium and metabolic syndrome. *Atherosclerosis* 2010; 200: 136-141.
161. Lloyd-Jones D, Adams RJ, Brown TM, Carnethon M, Dai S, De Simone G, Ferguson TB, Ford E, Furie K, Gillespie C, Go A, Greenlund K, Haase N, Hailpern S, Ho PM, Howard V, Kissela B, Kittner S, Lackland D, Lisabeth L, Marelli A, McDermott MM, Meigs J, Mozaffarian D, Mussolino M, Michol G, Roger V, Rosamond W, Sacco R, Sorlie P, Stafford R, Thom T, Wasserthiel-Smoller S, Wong ND, Wylie-Rosett J; on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Executive Summary: Heart Disease and Stroke Statistics 2010 Update. A report from the American Heart Association. *Circulation* 2010; 121(7): 948-54.
162. Wong ND, Lopez VA, Roberts CS, Solomon HA, Burke GL, Kuller L, Tracy R, Yanez D, Psaty BM. Combined association of lipids and blood pressure in relation to incident cardiovascular disease in the elderly: the Cardiovascular Health Study. *Am J Hypertens* 2010; 23(2):161-7.
163. Allebban Z, Gardin JM, Wong ND, Sklar SK, Bess RL, Spence MA, Pershadsingh HA. Relation of metabolic syndrome components to left ventricular mass in Mexican-Americans Versus Non-Hispanic Whites. *Metabolism* 2010; 59: 1551-5.
164. Jacobson AF, Senior R, Cerqueira MD, Wong ND, Thomas GS, Lopez VA, Agostini D, Weiland F, Chandna H, Narula J; ADMIRE-HF Investigators. Myocardial Iodine-123 Meta-Iodobenzylguanidine Imaging and Cardiac Events in Heart Failure: Results of the Prospective ADMIRE-HR (AdreView Myocardial

- Imaging for Risk Evaluation in Heart Failure) Study. *J Am Coll Cardiol* 2010; 55: 2212-21.
165. Cheng VY, Wolak A, Gutstein A, Gransar H, Wong ND, Dey D, Thomson LE, Hayes SW, Friedman JD, Slomka PJ, Berman DS. Low-density lipoprotein and noncalcified coronary plaque composition in patients with newly diagnosed coronary artery disease on computed tomographic angiography. *Am J Cardiol* 2010; 105: 761-6.
166. Ohshima S, Fujimoto S, Petrov A, Nakagami H, Haider N, Zhou J, Tahara N, Osako MK, Fujimoto A, Zhu J, Murohara T, Edwards DS, Narula N, Wong ND, Chandrashekar Y, Morishita R, Narula J. Effect of an antimicrobial agent on atherosclerotic plaques: assessment of metalloproteinase activity by molecular imaging. *J Am Coll Cardiol* 2010; 55: 1240-9.
167. Vulic D, Lee BT, Dede J, Lopez VA, Wong ND. Extent of control of cardiovascular risk factors and compliance to recommended therapies in U.S. multiethnic adults with coronary heart disease 2005-2006. *Am J Cardiovasc Drugs* 2010; 10: 109-14.
168. Wong ND, Vulic DB, Sobot M. Implementation of secondary prevention methodologies in ischemic heart disease. *Scripta Medica* 2010; 41: 29-35.
169. Cheng VY, Dey D, Tamarappoo B, Nakazato R, Gransar H, Miranda-Peats R, Ramesh A, Wong ND, Shaw LJ, Slomka PJ, Berman DS. Pericardial fat burden on ECG-gated noncontrast CT in asymptomatic patients who subsequently experience adverse cardiovascular events. *JACC Cardiovascular Imaging* 2010; 3: 352-60.
170. Vulic D, Loncar S, Krneta M, Skrbic R, Lazarevic A, Lee BT, Lopez VA, **Wong ND**. Risk factor control and adherence to treatment in patients with coronary heart disease in 2005-2006 in Republic of Srpska, Bosnia and Herzegovina. *Archives of Medical Sciences* 2010; 6: 183-187.
171. Lee HW, Le H, Lee BT, Lopez VA, **Wong ND**. Forced vital capacity paired with Framingham risk score for prediction of all-cause mortality in U.S. adults. *Eur Resp J* 2010; 36: 1002-6.
172. DeFilippis AP, Kramer HJ, Katz R, **Wong ND**, Bertoni AG, Carr J, Budoff MJ, Blumenthal RS, Nasir K. Association between coronary artery calcification progression and microalbuminuria: the MESA study. *JACC Cardiovasc Imaging* 2010; 3: 595-604.
173. Inoue K, Motoyama S, Sarai M, Sato T, Harigaya H, Hara T, Sanda Y, Anno H, Kondo T, **Wong ND**, Narula J, Ozaki Y. Serial coronary CT angiography-verified

changes in plaque characteristics as an end point: evaluation of effect of statin intervention. *JACC Cardiovasc Imaging* 2010; 3: 691-8.

174. Criqui MH, Kamineni A, Allison MA, Carr JJ, Cushman M, Detrano R, Post W, **Wong ND**. Risk factor differences for aortic vs. coronary calcified atherosclerosis: the Multi-Ethnic Study of Atherosclerosis. *Arterioscl Thromb Vasc Biol* 2010; 30: 2289-96.
175. Palaniappan LP, Araneta MR, Assimes TL, Barrett-Connor EL, Carnethon MR, Criqui MH, Fung FL, Narayan KM, Patel H, Taylor-Piliae RE, Wilson PWF, **Wong ND**. Call to Action: Cardiovascular Disease in Asian Americans. A Science Advisory From the American Heart Association. *Circulation* 2010; 122: 1242-52.
176. Colletti PM, Dustin LD, **Wong ND**, Shriki JE, Kawakubo M, Azen SP, Detrano RC. Does coronary calcium score predict future cardiac function? Association of subclinical atherosclerosis with left ventricular systolic and diastolic dysfunction at MR imaging in an elderly cohort. *Radiology* 2010; 257: 64-70.
177. Paramsothy P, Knopp RH, Bertoni AG, Blumenthal RS, Wasserman BA, Tsai MY, Rue T, **Wong ND**, Heckbert SR. Association of combinations of lipid parameters with carotid intima-media thickness and coronary artery calcium in the MESA (MultiEthnic Study of Atherosclerosis). *J Am Coll Cardiol* 2010; 56: 1034-41.
178. **Wong ND**, Lopez VA, Allison M, Detrano RC, Blumenthal RS, Folsom AR, Ouyang P, Criqui MH. Abdominal aortic calcium and multi-site atherosclerosis: the Multiethnic Study of Atherosclerosis. *Atherosclerosis* 2011; 214: 436-41.
179. Choi SE, Chow VH, Chung SJ, **Wong ND**. Do risk factors explain the increased prevalence of type 2 diabetes among California Asian adults? *J Immigrant and Minority Health* 2011; 13: 803-808.
180. Song M, Alexander CM, Mavros P, Lopez VA, Malik S, Phatak HM, **Wong ND**. Use of the UKPDS Outcomes Model to predict all-cause mortality in US adults with type 2 diabetes mellitus: Comparison of predicted versus observed mortality. *Diabetes Res Clin Pract* 2011; 91: 121-6.
181. Harjo TC, Perez A, Lopez V, **Wong ND**. Prevalence of diabetes and cardiovascular risk factors among California Native American Adults Compared to Other Ethnicities: The 2005 Californian Health Interview Survey. *Metab Syndr Relat Disord* 2011; 9: 49-54.
182. Roger VL, Go AS, Lloyd-Jones DM, Adams RJ, Berry JD, Brown TM, Carnethon MR, Dai S, de Simone G, Ford ES, Fox CS, Fullerton HJ, Gillespie C, Greenlund KJ, Hailpern SM, Heit JA, Ho PM, Howard VJ, Kissela BM, Kittner SJ, Lackland DT,

- Lichtman JH, Lisabeth LD, Makuc DM, Marcus GM, Marelli A, Matchar DB, McDermott MM, Meigs JB, Moy CS, Mozaffarian D, Mussolino ME, Nichol G, Paynter NP, Rosamond WD, Sorlie PD, Stafford RS, Turan TN, Turner MB, **Wong ND**, Wylie-Rosett J; on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart Disease and Stroke Statistics—2011 Update: A Report from the American Heart Association. *Circulation* 2011; 123: e18-e209.
183. Liang MT, Braun W, Bassin SL, Dutto D, Pontello A, **Wong ND**, Spalding TW, Arnaud SB. Effect of High-Impact Aerobics and Strength Training on BMD in Young Women Aged 20-35 Years. *Int J Sports Med* 2011; 32: 100-8.
184. Rozanski A, Gransar H, Shaw L, **Wong ND**, Min J, Miranda-Peats R, Hayes SW, Friedman JD, Berman DS. Comparison of the atherosclerotic burden among asymptomatic patients vs matched volunteers. *J Nucl Cardiol* 2011; 18: 291-8.
185. Budoff MJ, Nasir K, Katz R, Takasu J, Carr JJ, **Wong ND**, Allison M, Lima JA, Detrano R, Blumenthal RS, Kronmal R. Thoracic aortic calcification and coronary heart disease events: the multi-ethnic study of atherosclerosis (MESA). *Atherosclerosis* 2011; 215: 196-202.
186. Laughlin GA, Allison MA, Jensky NE, Aboyans V, **Wong ND**, Detrano R, Criqui MH. Abdominal Aortic Diameter and Vascular Atherosclerosis: The Multiethnic Study of Atherosclerosis. *Eur J Vasc Endovasc Surg* 2011; 41: 481-7.
187. Rozanaski A, Gransar H, Shaw LJ, Kim J, Miranda-Peats L, **Wong ND**, Rana JS, Orakzai R, Hayes SW, Friedman JD, Thomson LE, Polk D, Min J, Budoff MJ, Berman DS. Impact of coronary calcium scanning on coronary risk factors and downstream testing: the EISNER (Early Identification of Subclinical Atherosclerosis by Noninvasive Imaging Research) prospective randomized trial. *J Am Coll Cardiol* 2011; 57: 1622-32.
188. Franklin SS, Chow VH, Mori AD, **Wong ND**. The significance of low DBP in US adults with isolated systolic hypertension. *J Hypertens* 2011; 29: 1101-8.
189. Lee HM, Truong ST, **Wong ND**. Evidence of lung function for stratification of cardiovascular disease risk. *Korean Circ J* 2011; 41: 171-4.
190. Huang J, Wu YF, Liu XQ, Ding D, Zhao LC, Lu B, Li Z, **Wong ND**, Dustin LD, Azen SP, Detrano RC. Subclinical atherosclerosis in northern and southern China: the Chinese paradox. *J Geriatric Cardiol* 2011; 8: 72-77.
191. Malik S, Budoff MJ, Katz R, Blumenthal RS, Bertoni AG, Nasir K, Szklo M, Barr RG, **Wong ND**. Impact of subclinical atherosclerosis on cardiovascular disease

- events in persons with metabolic syndrome and diabetes: the Multiethnic Study of Atherosclerosis. *Diabetes Care* 2011; 34: 2285-90.
192. Tison GH, Blaha MJ, Budoff MJ, Katz R, Rivera JJ, Bertoni AG, **Wong ND**, Blumenthal RS, Szklo M, Eng J, Tracy R, Nasir K. The relationship of insulin resistance and extracoronary calcification in the Multiethnic Study of Atherosclerosis. *Atherosclerosis* 2011; 218: 507-10.
 193. Otaki Y, Rajani R, Cheng VY, Gransar H, Nakanishi R, Shmilovich H, Nakazato R, Hayes SW, Thomson LE, Friedman JD, Slomka PJ, **Wong ND**, Rozanski A, Shaw L, Budoff M, Berman DS, Dey D. The relationship between epicardial fat volume and incident coronary artery calcium. *J Cardiovasc Comput Tomogr.* 2011; 5: 310-6.
 194. Shmilovich H, Dey D, Cheng VY, Razani R, Nakazato R, Otaki Y, Nakanishi R, Slomka PJ, Thomson LE, Hayes SW, Friedman JD, Gransar H, **Wong ND**, Shaw LJ, Budoff M, Rozanski A, Berman DS. Threshold for the upper normal limit of indexed epicardial fat volume: derivation in a healthy population and validation in an outcome-based study. *Am J Cardiol* 2011; 108: 1680-5.
 195. DeFilippis AP, Blaha MJ, Ndumele CE, Budoff MJ, Lloyd-Jones DM, McClelland RL, Lakoski SG, Bushman M, **Wong ND**, Blumenthal RS, Lima J, Nasir K. The association of Framingham and Reynolds risk scores with incidence and progression of coronary artery calcification in MESA (Multi-Ethnic Study of Atherosclerosis). *J Am Coll Cardiol* 2011; 58: 2076-83.
 196. Nakazato R, Rajani R, Cheng VY, Shmilovich H, Nakanishi R, Otaki Y, Gransar H, Slomka PJ, Hayes SW, Thomson LE, Friedman JD, **Wong ND**, Shaw LJ, Budoff M, Rozanski A, Berman DS, Dey D. Weight change modulates epicardial fat burden: a 4-year serial study with non-contrast computed tomography. *Atherosclerosis* 2012; 220: 139-44.
 197. Roger VL, Go AS, Lloyd-Jones DM, Benjamin EJ, Berry JD, Borden WB, Bravata DM, Dai S, Ford ES, Fox CS, Fullerton HJ, Gillespie C, Hailpern SM, Heit JA, Howard VJ, Kissela BM, Kittner SJ, Lackland DT, Lichtman JH, Lisabeth LD, Makuc DM, Marcus GM, Marelli A, Matchar DB, Moy CS, Mozaffarian D, Mussolino ME, Nichol G, Paynter NP, Soliman EZ, Sorlie PD, Sotoodehnia N, Turan TN, Virani SS, **Wong ND**, Woo D, Turner MB; on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Executive Summary: Heart Disease and Stroke Statistics -2012 Update: A Report from the American Heart Association. *Circulation* 2012; 125: 188-197.
 198. Roger VL, Go AS, Lloyd-Jones DM, Benjamin EJ, Berry JD, Borden WB, Bravata DM, Dai S, Ford ES, Fox CS, Fullerton HJ, Gillespie C, Hailpern SM, Heit JA, Howard VJ, Kissela BM, Kittner SJ, Lackland DT, Lichtman JH, Lisabeth LD, Makuc DM, Marcus GM, Marelli A, Matchar DB, Moy CS, Mozaffarian D,

- Mussolino ME, Nichol G, Paynter NP, Soliman EZ, Sorlie PD, Sotoodehnia N, Turan TN, Virani SS, **Wong ND**, Woo D, Turner MB; on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart Disease and Stroke Statistics -2012 Update: A Report from the American Heart Association. *Circulation* 2012; 125: e2-e220.
199. Guo X, Zou L, Zhang X, Li J, Zheng L, Sun Z, Hu J, **Wong ND**, Sun Y. Prehypertension: a Meta-Analysis of the Epidemiology, Risk Factors, and Predictors of Progression. *Tex Heart Inst J* 2011; 38: 643-652.
200. **Wong ND**, Dede J, Chow VH, Wong KS, Franklin SS. Global Cardiovascular Risk Associated with Hypertension and Extent of Treatment and Control According to Risk Group. *Am J Hypertens* 2012; 25: 561-7.
201. **Wong ND**, Glovaci D, Wong K, Malik S, Franklin SS, Wygant G, Iloeje U. Global Cardiovascular Disease Risk Assessment in United States Adults with Diabetes. *Diab Vas Disease Res* 2012; 9: 146-152.
202. Rana JS, Transar H, **Wong ND**, Shaw L, Pencina M, Nasir K, Rozanski A, Hayes SW, Thomson LE, Friedman JD, Min JK, Berman DS. Value of Coronary Artery Calcium and Multiple Blood Biomarkers for Prognostication of Cardiovascular Events. *Am J Cardiol* 2012; 109: 1449-53.
203. Wong K, Glovaci D, Malik S, Franklin SS, Wygant G, Iloeje U, Kan H, **Wong ND**. Comparison of demographic factors and cardiovascular risk factor control among US adults with type 2 diabetes by insulin treatment classification. *J Diab and its Complications* 2012; 26: 169-74.
204. **Wong ND**, Nelson JC, Granston T, Bertoni AG, Blumenthal RS, Carr JJ, Guerci A, Jacobs DR, Kronmal R, Liu K, Saad M, Selvin E, Tracy R, Detrano R. Metabolic syndrome, diabetes, and incidence and progression of coronary calcium: the Multiethnic Study of Atherosclerosis (MESA). *J Am Coll Cardiovasc Img* 2012; 5: 358-66.
205. Barzilay JI, Davis BR, Pressel SL, Cutler JA, Einhorn PT, Black HR, Cushman WC, Ford CE, Margolis KL, Moloo J, Oparil S, Piller LB, Simmons DL, Sweeney ME, Whelton PK, **Wong ND**, Wright JT. Long-term effects of incident diabetes mellitus on cardiovascular outcomes in people treated for hypertension: The ALLHAT Diabetes Extension Study. *Circ Cardiovasc Qual Outcomes* 2012; 5: 153-162.
206. Lee HM, Truong ST, **Wong ND**. Association of adult-onset asthma with specific cardiovascular conditions. *Respir Med* 2012; 106: 948-53.

207. Lee HM, Lee J, Lee K, Luo Y, Sin DD, **Wong ND**. Relation between COPD severity and global cardiovascular risk in US adults. *Chest* 2012; 142(5):1118-25.
208. Dilsizian V, Zynda TK, Petrov A, Ohshima S, Tahara N, Haider N, Donohua A, Aras O, Femia FJ, Hillier SM, Joyal JL, **Wong ND**, Coleman T, Babich JW, Narula J. Molecular imaging of human ACE-1 expression in transgenic rats. *JACC Cardiovas Imaging* 2012; 5: 409-418.
209. Alipour N, **Wong ND**, Malik S. Diagnosis of coronary artery disease in persons with diabetes mellitus. *Curr Diab Rep* 2012; 12: 286-293.
210. Zynda TK, Thompson CD, Hoang KC, Seto AH, Glovaci D, **Wong ND**, Patel PM, Kern MJ. Disparity between angiographic coronary lesion complexity and lipid core plaques assessed by near infrared spectroscopy. *Catheter Cardiovasc Interv* 2012; 81(3):529-37.
211. Joshi PH, Chaudhari S, Blaha MJ, Jones SR, Martin SS, Post WS, Cannon CP, Fonarow GC, **Wong ND**, Amsterdam E, Hirshfeld JW, Blumenthal RS. A point-by-point response to recent arguments against the use of statins in primary prevention: this statement is endorsed by the American Society for Preventive Cardiology. *Clin Cardiol* 2012; 35(7):404-9.
212. Bilhorn KR, Luo Y, Lee BT, **Wong ND**. High density lipoprotein-cholesterol, high-sensitivity C-reactive protein, and cardiovascular disease in US adults. *Am J Cardiol* 2012; 110(10):1464-7.
213. Holland AT, Zhao B, Wong EC, Choi SE, **Wong ND**, Palaniappan L. Racial/Ethnic Differences in Control of Cardiovascular Risk Factors among Type 2 Diabetes Patients in an Insured, Ambulatory Care Population. *J Diab and its Complications* 2012; 27: 34-40.
214. **Wong ND**. Evidence for Psychosocial Risk Factors and Behavioral Interventions in Cardiovascular Disease (Review). *Current Cardiovascular Risk Reports* 2012; 6: 528-33.
215. Gluba A, Bielecka A, Mikhailidis DP, **Wong ND**, Franklin SS, Rysz J, Banach M. An update on biomarkers of heart failure in hypertensive patients. *J Hypertens*. 2012;30: 1681-9.
216. Drawz PE, Baraniuk S, Davis BR, Brown CD, Colon PJ Sr, Cujyet AB, Dart RA, Graumlich JF, Henriquez MA, Moloo J, Sakalayan MG, Simmons DL, Stanford C, Sweeney ME, **Wong ND**, Rahman M. Cardiovascular risk assessment: addition of CKD and race to the Framingham equation. *Am Heart J*. 2012; 164(6):925-31.

217. Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Borden WB, Bravata DM, Dai S, Ford ES, Fox CS, Franco S, Fullerton HJ, Gillespie C, Hailpern SM, Heit JA, Howard VJ, Huffman MD, Kissela BM, Kittner SJ, Lackland DT, Lichtman JH, Lisabeth LD, Magid D, Marcus GM, Marelli A, Matchar DB, McGuire DK, Mohler ER, Moy CS, Mussolino ME, Nichol G, Paynter NP, Schreiner PJ, Sorlie PD, Stein J, Turan TN, Virani SS, **Wong ND**, Woo D, Turner MB; on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Executive Summary: Heart Disease and Stroke Statistics--2013 Update: A Report From the American Heart Association. *Circulation* 2013; 127(1):143-152.
218. Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Borden WB, Bravata DM, Dai S, Ford ES, Fox CS, Franco S, Fullerton HJ, Gillespie C, Hailpern SM, Heit JA, Howard VJ, Huffman MD, Kissela BM, Kittner SJ, Lackland DT, Lichtman JH, Lisabeth LD, Magid D, Marcus GM, Marelli A, Matchar DB, McGuire DK, Mohler ER, Moy CS, Mussolino ME, Nichol G, Paynter NP, Schreiner PJ, Sorlie PD, Stein J, Turan TN, Virani SS, **Wong ND**, Woo D, Turner MB; American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics--2013 update: a report from the American Heart Association. *Circulation* 2013; 127(1):e6-e245.
219. Holland AT, Zhao B, Wong EC, Choi SE, **Wong ND**, Palaniappan LP. Racial/ethnic differences in control of cardiovascular risk factors among type 2 diabetes patients in an insured, ambulatory care population. *J Diabetes Complications*. 2013 Jan;27(1):34-40.
220. Tehrani D, Malik S, **Wong ND**. Coronary Artery Calcium Screening in Persons with Metabolic Syndrome and Diabetes: Implications for Prevention. *Metabolic Syndrome and Related Disorders* 2013; 11(3):143-8.
221. Budoff MJ, Young R, Lopez VA, Kronmal RA, Nasir K, Blumenthal RS, Detrano RC, Bild DE, Guerci AD, Liu K, Shea S, Szklo M, Post W, Lima J, Bertoni A, **Wong ND**. Progression of Coronary Calcium and Incident Coronary Heart Disease Events: The Multi-Ethnic Study of Atherosclerosis. *J Am Coll Cardiol* 2013; 61: 1231-1239.
222. **Wong ND**, Levy D. Legacy of the Framingham Heart Study: Rationale, Design, Initial Findings and Implications. *Global Heart* 2013; 8: 3-9.
223. Choi SE, Liu M, Palaniappan L, Wang EJ, **Wong ND**. Gender and ethnic differences in the prevalence of type 2 diabetes among Asian subgroups in California. *Journal of Diabetes and Its Complications* 2013 (in press).
224. Bassin SL, Luo Y, Li A, Perez A, **Wong ND**. Prevalence and Trends in Metabolic Syndrome and Associated Cardiovascular Risk Factors Among U.S. Adolescents 1999-2008. *Cardiovascular Endocrinology* 2013; 2: 23-30.

225. Franklin SS, **Wong ND**. Hypertension and Cardiovascular Disease: Contributions of the Framingham Heart Study. *Global Heart* 2013; 9: 49-57.
226. **Wong ND**, Chuang J, Wong K, Pham A, Neff D, Marrett E. Residual dyslipidemia among US adults treated with lipid modifying therapy: data from NHANES 2009-2010. *Am J Cardio* 2013; 112: 373-9.
227. Ahmed HM, Blaha MJ, Nasir K, Jones RS, Rivera JJ, Agatston A, Blankstein R, **Wong ND**, Lakoski S, Budoff MJ, Burke GL, Sibley CT, Ouyang P, Blumenthal RS. Low-risk lifestyle, coronary calcium, cardiovascular events, and mortality: results from MESA. *Am J Epidemiol* 2013; 178(1):12-21 .
228. Tang L, Patao C, Luo Y, **Wong ND**. Cardiovascular Risk Factor Control and Adherence to Recommended Lifestyle and Medical Therapies in Persons with Coronary Heart Disease (From the National Health and Nutrition Examination Survey 2007-2010). *Am J Cardiol* 2013; 112: 1126-32.
229. **Wong ND**, Patao C, Wong K, Malik S, Franklin SS, Iloeje U. Trends in control of cardiovascular risk factors among US adults with Type 2 diabetes 1999-2010: comparison by prevalent cardiovascular disease status. *Diabetes and Vascular Disease Res* 2013; 10: 505-13.
230. Largent JA, Vassey J, Bessonova L, Okerson T, **Wong ND**. Reduction in Framingham risk of cardiovascular disease in obese patients undergoing laparoscopic adjustable gastric banding. *Advances in Therapy* 2013;30(7):684-96
231. Wojczynski MK, Li M, Bielak LF, Kerr KF, Reiner AP, **Wong ND**, Yanek LR, Qu L, White CC, Lange LA, Ferguson JF, He J, Young T, Mosley TH, Smith JA, Kral BG, Guo X, Wong Q, Ganesh SK, Heckbert SR, Griswold ME, O Leary DH, Budoff M, Carr JJ, Taylor HA Jr, Bluemke DA, Demissie S, Hwang SJ, Paltoo DN, Polak JF, Psaty BM, Becker DM, Province MA, Post WS, O'Donnell CJ, Wilson JG, Harris TB, Kavousi M, Cupples LA, Rotter JJ, Fornage M, Becker LC, Peyser PA, Borecki IB, Reilly MP. Genetics of coronary artery calcification among African Americans, a meta-analysis. *BMC Med Genet* 2013 Jul 19;14(1):75.
232. Chen MA, Kawakubo M, Colletti PM, Xu D, Labree Dustin L, Detrano R, Azen SP, **Wong ND**, Zhao XQ. Effect of age on aortic atherosclerosis. *J Geriatr Cardio* 2013; 10: 135-40.
233. Tehrani DM, Gardin JM, Yanez D, Hirsch CH, Lloyd-Jones DM, Stein PK, **Wong ND**. Impact of Inflammatory Biomarkers on Relation of High Density Lipoprotein-Cholesterol with Incident Coronary Heart Disease: Cardiovascular Health Study. *Atherosclerosis* 2013; 231: 246-251.

234. Groves EM, Yu K, **Wong ND**, Malik S. Standard and novel treatment options for metabolic syndrome and diabetes mellitus. *Current Treatment Options in Cardiovascular Medicine* 2013; Nov 15 (epub ahead of press)
235. Tamang TGL, Tang L, Chuang J, Patel RJ, **Wong ND**. Examining risk factor goal attainment and adherence to treatment among US heart failure patients: the National Health and Nutrition Examination Survey 2007-2010. *Am J Cardiovas Drugs* 2014; 14: 41-9.
236. **Wong ND**, Patao C, Malik S, Iloeje U. Preventable Coronary Heart Disease Events from Control of Cardiovascular Risk Factors in US Adults With Diabetes (Projections from Utilizing the UKPDS Risk Engine). *Am J Cardiol*. 2014; 113(8):1356-61.
237. Pandey AK, Blaha MJ, Sharma K, Rivera J, Budoff MJ, Blankstein R, Al-Mallah M, **Wong ND**, Shaw L, Carr J, O'Leary D, Lima JA, Szklo M, Blumenthal RS, Nasir K. Family history of coronary heart disease and the incidence and progression of coronary artery calcification: Multi-Ethnic Study of Atherosclerosis (MESA). *Atherosclerosis*. 2014; 232(2):369-76.
238. Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Blaha MJ, Dai S, Ford ES, Fox CS, Franco S, Fullerton HJ, Gillespie C, Hailpern SM, Heit JA, Howard VJ, Huffman MD, Judd SE, Kissela BM, Kittner SJ, Lackland DT, Lichtman JH, Lisabeth LD, Mackey RH, Magid DJ, Marcus GM, Marelli A, Matchar DB, McGuire DK, Mohler ER 3rd, Moy CS, Mussolino ME, Neumar RW, Nichol G, Pandey DK, Paynter NP, Reeves MJ, Sorlie PD, Stein J, Towfighi A, Turan TN, Virani SS, **Wong ND**, Woo D, Turner MB; American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Executive summary: heart disease and stroke statistics—2014 update: a report from the American Heart Association. *Circulation* 2014;129:399-410.
239. Go AS, Mozaffarian D, Roger VL, Benjamin EJ, Berry JD, Blaha MJ, Dai S, Ford ES, Fox CS, Franco S, Fullerton HJ, Gillespie C, Hailpern SM, Heit JA, Howard VJ, Huffman MD, Judd SE, Kissela BM, Kittner SJ, Lackland DT, Lichtman JH, Lisabeth LD, Mackey RH, Magid DJ, Marcus GM, Marelli A, Matchar DB, McGuire DK, Mohler ER 3rd, Moy CS, Mussolino ME, Neumar RW, Nichol G, Pandey DK, Paynter NP, Reeves MJ, Sorlie PD, Stein J, Towfighi A, Turan TN, Virani SS, **Wong ND**, Woo D, Turner MB; American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics--2014 update: a report from the American Heart Association. *Circulation* 2014; 129(3):e28-e292
240. Sunkara N, **Wong ND**, Malik S. Role of coronary artery calcium in cardiovascular risk assessment. *Expert Rev Cardiovasc Ther*. 2014 Jan;12(1):87-94.

241. Pokharel Y, Macedo FY, Nambi V, Martin SS, Nasir K, **Wong ND**, Boone J, Roberts AJ, Ballantyne CM, Virani SS. Neck circumference is not associated with subclinical atherosclerosis in retired national football league players. *Clin Cardiol* 2014; 37(7):402-7.
242. **Wong ND**. Epidemiological studies of CHD and the evolution of preventive cardiology. *Nat Rev Cardiol* 2014; 11: 276-89.
243. Lee HM, Liu M, Lee K, Luo Y, **Wong ND**. Does low vitamin D amplify the association of COPD with total and cardiovascular disease mortality? *Clin Cardiol* 2014; 37(8):473-8.
244. Criqui MH, Dennenberg JO, McClelland R, Allison MA, Ix JH, Guerci A, Cohoon KP, Srikanthan P, Watson KE, **Wong ND**. Abdominal aortic calcium, coronary artery calcium, and cardiovascular morbidity and mortality in the Multiethnic Study of Atherosclerosis. *Arterioscler Thromb Vasc Biol* 2014; 34(7):1574-9.
245. Gardin JM, Bartz TM, Polak JF, O'Leary DH, **Wong ND**. What do carotid intima-media thickness and plaque add to the prediction of stroke and cardiovascular disease risk in older adults? The cardiovascular health study. *J Am Soc Echocardiogr.* 2014; 27(9):998-1005.
246. Yeboah J, Erbel R, Delaney JC, Nance R, Guo M, Bertoni AG, Budoff M, Moebus S, Jöckel KH, Burke GL, **Wong ND**, Lehmann N, Herrington DM, Möhlenkamp S, Greenland P. Development of a new diabetes risk prediction tool for incident coronary heart disease events: The Multi-Ethnic Study of Atherosclerosis and the Heinz Nixdorf Recall Study. *Atherosclerosis* 2014; 236: 411-7.
247. Pokharel Y, Nambi V, Martin SS, Hoogeveen RC, Nasir K, Khera A, **Wong ND**, Jones PH, Boone J, Roberts AJ, Ballantyne CM, Virani SS. Association between lipoprotein associated phospholipase A2 mass and subclinical coronary and carotid atherosclerosis in Retired National Football League players. *Atherosclerosis* 2014; 236:251-6
248. Franklin SS, **Wong ND**. The complexity of masked hypertension: diagnostic and management challenges. *Curr Hypertens Rep* 2014; 16: 474.
249. Lee HM, Liu MA, Barrett-Connor E, **Wong ND**. Association of Lung Function with Coronary Heart Disease and Cardiovascular Disease Outcomes in Elderly: The Rancho Bernardo Study. *Respiratory Medicine* 2014; 9: 399-407.
250. Pokharel Y, Basra S, Lincoln AE, Tucket M, Nambi V, Nasir K, Vogel RA, **Wong ND**, Boone JL, Roberts AJ, Ballantyne CM, Virani SS. Association of body mass index and waist circumference with subclinical atherosclerosis in retired NFL players. *Southern Medical Journal* 2014; 107: 633-9.

251. **Wong ND**, Franklin SS. Epidemiology of Hypertension. *J Am Soc Hypertens* 2014; 8: 760-3.
252. Franklin SS, Gokhale SS, Chow VH, Larson MG, Levy D, Vasan RS, Mitchell GF, **Wong ND**. *Hypertension* 2015; 299-305.
253. Zhao Y, Malik S, **Wong ND**. Evidence for Coronary Artery Calcification Screening in the Early Detection of Coronary Artery Disease and Implications for Screening in Developing Countries. *Glob Heart* 2014; 9: 399-407.
254. **Wong ND**, Moran AE. The US Prevention of Cardiovascular Disease Guidelines and Implications for Implementation in LMIC. *Glob Heart* 2014; 445-455.
255. Banach M, Rizzo M, Toth PP, Farnier M, Davidson MH, Al-Rasadi K, Aronow WS, Athyros V, Djuric DM, Ezhov MV, Greenfield RS, Hovingh GK, Kostner K, Serban C, Lighezan D, Fras Z, Moriarty PM, Munter P, Goudev A, Ceska R, Nicholls SJ, Brohncel M, Nikolic D, Pella D, Puri R, Rysz J, **Wong ND**, Bajnok L, Jones SR, Ray KK, Mikhailidis DP. Statin intolerance – an attempt at a unified definition. Position paper from an International Lipid Expert Panel. *Arch Med Sci* 2015; 11 (1): 1-23.
256. Sahebkar A, Serban C, Ursoniu S, **Wong ND**, Muntner P, Graham IM, Mikhailidis DP, Rizzo MK, Rysz J, Sperling LS, Lip GYH, Banach M. Lipid and Blood Pressure Meta-analysis Collaboration (LBPMC) Group. Lack of efficacy of resveratrol on c-reactive protein and selected cardiovascular risk factors – results from a systematic review and meta-analysis of randomized controlled trials. *Int J Cardiol* 2015 (in press)
257. Zhao Y, **Wong ND**. Screening subclinical coronary artery disease with non-invasive modalities in patients with diabetes. *Cardiovascular Endocrinology* 2015 (in press).
258. Banach M, Rizzo M, Toth PP, Farnier M, Davidson MH, Al-Rasadi K, Aronow WS, Athyros V, Djuric DM, Ezhov MV, Greenfield RS, Hovingh GK, Kostner K, Serban C, Lighezan D, Fras Z, Moriarty PM, Muntner P, Goudev A, Ceska R, Nicholls SJ, Broncel M, Nikolic D, Pella D, Puri R, Rysz J, **Wong ND**, Bajnok L, Jones SR, Ray KK, Mikhailidis DP. Statin intolerance - an attempt at a unified definition. Position paper from an International Lipid Expert Panel. *Expert Opin Drug Saf*. 2015 Apr 24:1-21. [Epub ahead of print]
259. Warraich HJ, **Wong ND**, Rana JS. Role for combination therapy in diabetic dyslipidemia. *Curr Cardiol Rep*. 2015 May;17(5):589.

260. Wong JM, Lombardo DM, Barseghian A, Dhoot J, Hundal HS, Salcedo J, Paganini-Hill A, **Wong ND**, Fisher M. Left atrial septal pouch in cryptogenic stroke. *Front Neurol*. 2015 Mar 24;6:57.
261. **Wong ND**, Chuang JY, Zhao Y, Rosenblit PD. Residual Dyslipidemia According to LDL-C, non-HDL-C and Apolipoprotein B by Cardiovascular Risk Category among Statin-Treated US Adults 2009-2010. *J Clin Lipidol* 2015; 9(4):525-32.
262. Hoang K, Zhao Y, Gardin JM, Carnethon M, Mukamal K, Yanez D, **Wong ND**. Left Ventricular Mass as a Predictor of Cardiovascular Disease Events in Older Adults with and without Metabolic Syndrome and Diabetes. *J Am Coll Cardiol Cardiol Img* 2015; Aug 20.
263. Tison GH, Guo M, Blaha MJ, McClelland RL, Allison MA, Szklo M, **Wong ND**, Blumenthal RS, Budoff MJ, Nasir K. Multisite extracoronary calcification indicates increased risk of coronary heart disease and all-cause mortality: The Multi-Ethnic Study of Atherosclerosis. *J Cardiovasc Comput Tomogr* 2015; S1934-5925(15)00109-4.
264. Banach M, Rizzo M, Toth PP, Farnier M, Davidson MH, Al-Rasadi K, Aronow WS, Athyros V, Djuric DM, Ezhov MV, Greenfield RS, Hovingh GK, Kostner K, Serban C, Lighezan D, Fras Z, Moriarty PM, Muntner P, Goudev A, Ceska R, Nicholls SJ, Broncel M, Nikolic D, Pella D, Puri R, Rysz J, **Wong ND**, Bajnok L, Jones SR, Ray KK, Mikhailidis DP. Statin intolerance - an attempt at a unified definition. Position paper from an International Lipid Expert Panel. *Expert Opin Drug Saf*. 2015;14(6):935-55.
265. Kopecky S, Baum S, Foody JM, Koren M, McKenney J, Sperling L, **Wong ND**. Statin Intolerance Roundtable Participants. Insights Into Statin Intolerance. *Clin Cardiol* 2015; 38: 520-526.
266. Katz R, Budoff MJ, O'Brien KD, **Wong ND**, Nasir K. The metabolic syndrome and diabetes mellitus as predictors of thoracic aortic calcification as detected by non-contrast computed tomography in the Multi-Ethnic Study of Atherosclerosis. *Diabet Med* 2015; Sept 4; doi: 10.1111/dme.12958.
267. Quek RGW, Fox KM, Wang L, Li L, Gandra SR, **Wong ND**. Lipid-lowering treatment patterns among patients with type 2 diabetes mellitus with high cardiovascular disease risk. *BMC Open Diabetes Research and Care* 2015; 3: 3000132. Doi: 10.1136/bmjdr-2015-00132.
268. Youssef G, Guo M, McClelland RL, Shavell DM, Nasir K, Rivera J, Carr JJ, **Wong ND**, Budoff MJ. Risk factors for the development and progression of thoracic

aortic calcification: the Multi-Ethnic Study of Atherosclerosis. *Acad Radiol* 2015; 22: 1536-45.

269. Postley JE, Luo Y, **Wong ND**, Gardin JM. Identification by ultrasound evaluation of the carotid and femoral arteries of high-risk subjects missed by three validation cardiovascular disease risk algorithms. *Am J Cardiol* 2015; 116: 1617-23.

270. Tehrani DM, **Wong ND**. Cardiovascular disease risk assessment: review of established and newer modalities. *Curr Treat Options Cardiovasc Med* 2015; 17: 57.

271. Hui G, Koch B, Calara F, **Wong ND**. Angina in coronary artery disease patients with and without diabetes: US National Health and Nutrition Examination Survey 2001-2010. *Clin Cardiol* 2016; 39: 30-6.

272. Quek GW, Fox KM, W L, Li L, Gandra SR, **Wong ND**. Real World Lipid-lowering Treatment Patterns Among Patients With High Cardiovascular Disease Risk or a Previous Coronary Event: A United States Claims-based Analysis. *Am J Cardiol* 2016; 117: 495-500.

273. Boulos NM, Gardon JM, Malik S, Postley J, **Wong ND**. Carotid plaque characterization, stenosis, and intima-media thickness according to age and gender in a large registry cohort. *Am J Cardiol* 2016; 117: 1185-1191.

274. Forbes C, Quek RG, Deshpande S, Worthy G, Ross J, Kleijnen J, Gandra SR, Kassahun H, **Wong ND**, Nicholls SJ. Relationship between changes in coronary atherosclerotic plaque burden measured by intravascular ultrasound and cardiovascular disease outcomes: a systematic literature review. *Curr Med Res Opin* 2016; 32: 1143-1150.

275. Blaha MJ, Budoff MJ, Tota-Maharaj R, Dardari ZA, **Wong ND**, Kronmal RA, Eng J, Post WS, Blumenthal RS, Nasir K. Improving the CAC score by addition of regional measures of calcium distribution: Multi-ethnic Study of Atherosclerosis. *JACC Cardiovas Imaging* 2016; Apr 7 (Epub ahead of print).

276. **Wong ND**, Zhao Y, Patel R, Patao C, Malik S, Bertoni AG, Correa A, Folsom AR, Kachroo S, Mukherjee J, Taylor H, Selvin E. Cardiovascular risk factor targets and cardiovascular disease event risk in diabetes, a pooling project of the Atherosclerosis Risk in Communities Study, Multi-Ethnic Study of Atherosclerosis, and Jackson Heart Study. *Diabetes Care* 2016; 2016;39:668-676.

277. Kianoush S, Al Rifai M, Whelton SP, Shaya GE, Bush A, Graham G, **Wong ND**, Blaha MJ. Stratifying cardiovascular risk in diabetes: the role of diabetes-related clinical characteristics and modern imaging. *Diabetes and its Complications* 2016 Apr 30 (epub ahead of print).

278. Forbes C, Quek RGW, Despande S, Worthy G, Wolff R, Stirk L, Kleijnen J, Gandra SR, Djedjos S, **Wong ND**. The relationship between Lp(a) and CVD outcomes: a systematic review. *Lipids in Health and Disease* 2016; 15: 95 (review).
279. Zhao Y, Delaney JA, Quek RGW, Gardin JM, Hirsch C, Gandra SR, **Wong ND**. Cardiovascular disease, mortality risk and healthcare costs by lipoprotein(a) levels according to low density lipoprotein-cholesterol levels in older high risk adults. *Clinical Cardiology* 2016; 39: 413-420.
280. Tehrani DM, Zhao Y, Blaha MJ, Mora S, Mackey RH, Michos ED, Budoff MJ, Cromwell W, Otvos J, Rosenblit PD, **Wong ND**. Discordance of low density lipoprotein and high density lipoprotein cholesterol particle vs. cholesterol concentration for the prediction of cardiovascular disease in patients with metabolic syndrome and diabetes mellitus (from the Multi-Ethnic Study of Atherosclerosis [MESA]). *Am J Cardiol* 2016; 117: 1921-7.
281. Vulic D, Loncar S, Ostojic M, Marinkovic J, Vulic B, **Wong ND**. Risk factor indicators in offspring of patients with premature coronary heart disease in Banja Luka region/Republic of Srpska/Bosnia and Herzegovina. *Arch Med Sci.* 2016; 12(4):736-41.
282. Schreiner PJ, Jacobs DR Jr, **Wong ND**, Kiefe CI. Twenty-Five Year Secular Trends in Lipids and Modifiable Risk Factors in a Population-Based Biracial Cohort: The Coronary Artery Risk Development in Young Adults (CARDIA) Study, 1985-2011. *J Am Heart Assoc.* 2016 Jul 5; 5(7).
283. Arnold SV, Inzucchi SE, McGuire DK, Mehta SN, Goyal A, Sperling LS, Maddox TM, Einhorn D, **Wong ND**, Ratner RE, Hammar N, Fenici P, Sheehan JJ, Wong JL, Kosiborod M. Evaluating the Quality of Comprehensive Cardiometabolic Care for Patients With Type 2 Diabetes in the U.S.: The Diabetes Collaborative Registry. *Diabetes Care* 2016;39(7):e99-e101.
284. **Wong ND**, Young D, Zhao Y, Nguyen H, Caballes J, Khan I, Sanchez RJ. Prevalence of the American College of Cardiology/American Heart Association statin eligibility groups, statin use, and low-density lipoprotein cholesterol control in US adults using the National Health and Nutrition Examination Survey 2011-2012. *J Clin Lipidol* 2016; 10(5):1109-18
285. Tehrani DM, **Wong ND**. Integrating Biomarkers and Imaging for Cardiovascular Disease Risk Assessment in Diabetes. *Curr Cardiol Rep.* 2016; 18(11):105. doi: 10.1007/s11886-016-0789-7. Review.
286. Brie D, Sahebkar A, Penson PE, Dinca M, Ursoniu S, Serban MC, Zanchetti A, Howard G, Ahmed A, Aronow WS, Muntner P, Lip GY, **Wong ND**, Rysz J, Banach M; Lipid, Blood Pressure Meta-analysis Collaboration (LBPMC) Group. Effects of

- pentoxifylline on inflammatory markers and blood pressure: a systematic review and meta-analysis of randomized controlled trials. *J Hypertens* 2016; 23: 2318-2329.
287. Schreiner PJ, Jacobs DR Jr, **Wong ND**, Kiefe CI. Twenty-Five Year Secular Trends in Lipids and Modifiable Risk Factors in a Population-Based Biracial Cohort: The Coronary Artery Risk Development in Young Adults (CARDIA) Study, 1985-2011. *J Am Heart Assoc*. 2016 Jul 5;5(7). pii: e003384.
288. Criqui MH, Aboyans V, Allison MA, Denenberg JO, Forbang N, McDermott MM, Wassel CL, **Wong ND**. Peripheral Artery Disease and Aortic Disease. *Glob Heart* 2016 Sep;11(3):313-326. doi: 10.1016/j.gheart.2016.08.005. Review.
289. Burke G, Lima J, **Wong ND**, Narula J. The Multiethnic Study of Atherosclerosis. *Glob Heart*. 2016;11 (3): 267-268.
290. **Wong ND**. ACC/AHA guidelines for cardiovascular disease prevention and cholesterol management: implications of new therapeutic agents. *Cardiovasc Innov Appl* 2016; 1: 399-408.
291. Rosenblit PD, Lepor NE, **Wong ND**. The emergence of cardiometabolism. *Cardiovascular Endocrinology* 2017; 6: 3-7.
292. Cordola-Hsu AR, **Wong ND**. Cardiovascular health awareness and promotion in women: AHA's Life's Simple 7 and Go Red for Women. *Curr Cardiovasc Risk Rep* 2017; 11: 13.
293. **Wong ND**, Rosenblit PD, Greenfield RS. Advances in dyslipidemia management for prevention of atherosclerosis: PCSK9 monoclonal antibody therapy and beyond. *Cardiovasc Diagn Ther*. 2017 Apr;7(Suppl 1):S11-S20. doi: 10.21037/cdt.2017.03.02. Review.
294. Graham IM, Catapano AL, **Wong ND**. Current guidelines on prevention with a focus on dyslipidemias. *Cardiovasc Diagn Ther*. 2017 Apr;7(Suppl 1):S4-S10. Review.
295. Bakhshi H, Ambale-Venkatesh B, Yang X, Ostovaneh MR, Wu CO, Budoff M, Bahrami H, **Wong ND**, Bluemke DA, Lima JAC. Progression of Coronary Artery Calcium and Incident Heart Failure: The Multi-Ethnic Study of Atherosclerosis. *J Am Heart Assoc* 2017; 6(4). pii: e005253.
296. Kim J, Budoff MJ, Nasir K, **Wong ND**, Yeboah J, Al-Mallah MH, Shea S, Dardari ZA, Blumenthal RS, Blaha MJ, Cainzos-Achirica M. Thoracic aortic calcium, cardiovascular disease events, and all-cause mortality in asymptomatic individuals with zero coronary calcium: The Multi-Ethnic Study of Atherosclerosis (MESA). *Atherosclerosis* 2017;257: 1-8.

298. **Wong ND**, Zhao Y, Quek RGW, Blumenthal RS, Budoff MJ, Cushman M, Garg P, Sandfort V, Tsai M, Lopez JAG. Residual atherosclerotic cardiovascular disease risk in statin-treated adults: The Multi-Ethnic Study of Atherosclerosis. *J Clin Lipidol* 2017; 120(7):1220-1222.

299. Gupta A, Lau E, Varshney R, Hulten EA, Cheezum M, Bittencourt MS, Blaha MJ, **Wong ND**, Blumenthal RS, Budoff MJ, Umscheid CA, Nasir K, Blankstein R. The identification of calcified coronary plaque is associated with initiation and continuation of pharmacological and lifestyle preventive therapies: a systematic review and meta-analysis. *J Am Coll Cardiol Img* 2017; 10: 833-842.

300. Cicero AFG, Colletti A, Bajraktari G, Descamps O, Djuric DM, Ezhov M, Fras Z, Katsiki N, Langlois M, Latkovskis G, Panagiotakos DB, Paragh G, Mikhailidis DP, Mitchenko O, Paulweber B, Pella D, Pitsavos C, Reiner Ž, Ray KK, Rizzo M, Sahebkar A, Serban MC, Sperling LS, Toth PP, Vinereanu D, Vrablík M, **Wong ND**, Banach M. Lipid lowering nutraceuticals in clinical practice: position paper from an International Lipid Expert Panel. *Arch Med Sci* 2017; 13: 965-1005.

301. Thomas IC, McClelland RL, Michos ED, Allison MA, Forbang NI, Longstreth WT Jr, Post WS, **Wong ND**, Budoff MJ, Criqui MH. Density of calcium in the ascending thoracic aorta and risk of incident cardiovascular disease events. *Atherosclerosis* 2017;265: 190-196.

302. Lee HM, Fan W, Kieu C, Lee A, **Wong ND**. Association of Lung Function and Chronic Obstructive Pulmonary Disease with American Heart Association's Life's Simple 7 Cardiovascular Health Metrics *Resp Med* 2017 (in press)

303. Cicero AFG, Colletti A, Bajraktari G, Descamps O, Djuric DM, Ezhov M, Fras Z, Katsiki N, Langlois M, Latkovskis G, Panagiotakos DB, Paragh G, Mikhailidis DP, Mitchenko O, Paulweber B, Pella D, Pitsavos C, Reiner Ž, Ray KK, Rizzo M, Sahebkar A, Serban MC, Sperling LS, Toth PP, Vinereanu D, Vrablík M, **Wong ND**, Banach M on behalf of the International Lipid Expert Panel (ILEP). Lipid Lowering Nutraceuticals in Clinical Practice: Position Paper from an International Lipid Expert Panel. *Nutrition Reviews* 2017; 75: 731-767.

304. Arnold SV, Inzucchi SE, Tang F, McGuire DK, Mehta SN, Maddox TM, Goyal A, Sperling LS, Einhorn D, **Wong ND**, Khunti K, Lam CSP, Kosiborod M. Real-World Use and Modelled Impact of Glucose Lowering Therapies Evaluated in Recent Cardiovascular Outcomes Trials: An NCDR® Research to Practice Project. *Eur J Prev Cardiol.* 2017; 24: 1637-1645

305. Arnold SV, Goyal A, Inzucchi SE, McGuire DK, Tang F, Mehta SN, Sperling LS,

- Maddox TM, Einhorn D, **Wong ND**, Hammar N, Fenici P, Khunti K, Lam CSP, Kosiborod . Quality of Care of the Initial Patient Cohort of the Diabetes Collaborative Registry®. *J Am Heart Assoc*. 2017; 6(8).
306. Malik S, Zhao Y, Budoff M, Nasir K, Blumenthal RS, Bertoni AG, **Wong ND**. Utility of coronary artery calcium score in risk classification and prediction of long-term cardiovascular disease in those with diabetes and metabolic syndrome: the Multiethnic Study of Atherosclerosis (MESA). *JAMA Cardiology* 2017; 2: 1332-1340.
307. Mazidi M, **Wong ND**, Katsiki N, Mikhailidis DP, Banach M. Dietary patterns, plasma vitamins and Trans fatty acids are associated with peripheral artery disease. *Lipids Health Dis* 2017;16: 254.
308. Kianoush S, Al Rifai M, Cainzos-Achirica M, Al-Mallah MH, Tison GH, Yeboah J, Miedema MD, Allison MA, **Wong ND**, DeFilippis AP, Longstreth W, Nasir K, Budoff MJ, Matsushita K, Blaha MJ. Thoracic extra-coronary calcification for the prediction of stroke: The Multi-Ethnic Study of Atherosclerosis. *Atherosclerosis* 2017; 267:61-67.
309. Fan W, Lee H, Lee A, Kieu C, **Wong ND**. Association of lung function and chronic obstructive pulmonary disease with American Heart Association's Life's Simple 7 cardiovascular health metrics. *Respir Med* 2017; 131:85-93.
310. Goeller M, Achenbach S, Marwan M, Doris MK, Cadet S, Commandeur F, Chen X, Slomka PJ, Gransar H, Cao JJ, **Wong ND**, Albrecht MH, Rozanski A, Tamarappoo BK, Berman DS, Dey D. Epicardial adipose tissue density and volume are related to subclinical atherosclerosis, inflammation and major adverse cardiac events in asymptomatic subjects. *J Cardiovasc Comput Tomogr* 2018; 12: 67-73.
311. Thomas IC, McClelland RL, Allison MA, Ix JH, Michos ED, Forbang NI, Post WS, **Wong ND**, Budoff MJ, Criqui MH. Progression of calcium density in the ascending thoracic aorta is inversely associated with incident cardiovascular disease events. *Eur Heart J Cardiovasc Imaging*. 2018 Feb 5. doi: 10.1093/ehjci/jeu007.
312. Arnold SV, McGuire DK, Inzucchi SE, Tang F, Mehta SN, Lam CSP, Goyal A, Sperling LS, **Wong ND**, Hammar N, Fenici P, Kosiborod M. Assessing use of patient-focused pharmacotherapy in glycemic management through the Diabetes Collaborative Registry (DCR). *J Diabetes Complications*. 2018 Aug 9. pii: S1056-8727(17)31407-1. doi: 10.1016/j.jdiacomp.2018.02.009.
313. Banach M, Patti AM, Giglio RV, Cicero AFG, Atanasov AG, Bajraktari G, Bruckert E, Descamps O, Djuric DM, Ezhov M, Fras Z, von Haehling S, Katsiki N, Langlois M, Latkovskis G, Mancini GBJ, Mikhailidis DP, Mitchenko O, Moriarty PM, Muntner P, Nikolic D, Panagiotakos DB, Paragh G, Paulweber B, Pella D, Pitsavos C, Reiner Ž, Rosano GMC, Rosenson RS, Rysz J, Sahebkar A, Serban MC, Vinereanu D, Vrablík M, Watts GF, **Wong ND**, Rizzo M; International Lipid Expert Panel (ILEP). The Role of

Nutraceuticals in Statin Intolerant Patients. *J Am Coll Cardiol.* 2018 Jul 3;72(1):96-118. doi: 10.1016/j.jacc.2018.04.040. Review.

314. Lee HM, Zhao Y, Liu MA, Yanez D, Carnethon M, Graham Barr R, **Wong ND**. Impact of lung-function measures on cardiovascular disease events in older adults with metabolic syndrome and diabetes. *Clin Cardiol.* 2018 Jul;41(7):959-965. doi: 10.1002/clc.22985. Epub 2018 Jul 17. PubMed PMID: 29797803.

315. Khambhati J, Allard-Ratick M, Dhindsa D, Lee S, Chen J, Sandesara PB, O'Neal W, Quyyumi AA, **Wong ND**, Blumenthal RS, Sperling LS. The art of cardiovascular risk assessment. *Clin Cardiol.* 2018 May;41(5):677-684. doi: 10.1002/clc.22930. Epub 2018 May 10. Review. PubMed PMID: 29746005.

316. Budoff MJ, Young R, Burke G, Jeffrey Carr J, Detrano RC, Folsom AR, Kronmal R, Lima JAC, Liu KJ, McClelland RL, Michos E, Post WS, Shea S, Watson KE, **Wong ND**. Ten-year association of coronary artery calcium with atherosclerotic cardiovascular disease (ASCVD) events: the multi-ethnic study of atherosclerosis (MESA). *Eur Heart J.* 2018 Jul 1;39(25):2401-2408. doi: 10.1093/eurheartj/ehy217. PubMed PMID: 29688297; PubMed Central PMCID: PMC6030975.

317. Zhao Y, Evans MA, Allison MA, Bertoni AG, Budoff MJ, Criqui MH, Malik S, Ouyang P, Polak JF, **Wong ND**. Multisite atherosclerosis in subjects with metabolic syndrome and diabetes and relation to cardiovascular events: The Multi-Ethnic Study of Atherosclerosis. *Atherosclerosis.* 2019 Mar;282:202-209. doi: 10.1016/j.atherosclerosis.2018.12.005. Epub 2018 Dec 15. PubMed PMID: 30600075; PubMed Central PMCID: PMC6401246.

318. Arnold SV, McGuire DK, Inzucchi SE, Tang F, Mehta SN, Lam CSP, Goyal A, Sperling LS, **Wong ND**, Hammar N, Fenici P, Kosiborod M. Assessing use of patient-focused pharmacotherapy in glycemic management through the Diabetes Collaborative Registry (DCR). *J Diabetes Complications.* 2018 Nov;32(11):1035-1039. doi: 10.1016/j.jdiacomp.2018.02.009. Epub 2018 Aug 9. PubMed PMID: 30177468.

319. Vulic D, Secerov Zecevic D, Burgic M, Vujkovic Z, Ristic S, Marinkovic J, Medenica S, **Wong ND**. Post-trauma cardiovascular risk factors and subclinical atherosclerosis in young adults following the war in Bosnia and Herzegovina. *Eur J Psychotraumatol.* 2019 Apr 24;10(1):1601988. doi: 10.1080/20008198.2019.1601988. eCollection 2019. PubMed PMID: 31069023; PubMed Central PMCID: PMC6493224.

320. Garg PK, Jorgensen NW, McClelland RL, Leigh JA, Greenland P, Blaha MJ, Yoon AJ, **Wong ND**, Yeboah J, Budoff MJ. Use of coronary artery calcium testing to improve coronary heart disease risk assessment in a lung cancer screening population: The Multi-Ethnic Study of Atherosclerosis (MESA). *J Cardiovasc Comput Tomogr.* 2018 Nov - Dec;12(6):493-499. doi: 10.1016/j.jcct.2018.10.001. Epub 2018

Oct 2. PubMed PMID: 30297128; PubMed Central PMCID: PMC6585432.

321. Zhao Y, **Wong ND**. The Evolving Cardiovascular Disease Risk Scores for Persons with Diabetes Mellitus. *Curr Cardiol Rep*. 2018 Oct 11;20(12):126. doi: 10.1007/s11886-018-1069-5. Review. PubMed PMID: 30310997.

322. Younus M, Fan W, Harrington DS, **Wong ND**. Usefulness of a Coronary Artery Disease Predictive Algorithm to Predict Global Risk for Cardiovascular Disease and Acute Coronary Syndrome. *Am J Cardiol*. 2019 Mar 1;123(5):769-775. doi: 10.1016/j.amjcard.2018.11.044. Epub 2018 Dec 4. PubMed PMID: 30563615.

323. Fan W, Philip S, Granowitz C, Toth PP, **Wong ND**. Hypertriglyceridemia in statin-treated US adults: the National Health and Nutrition Examination Survey. *J Clin Lipidol*. 2019 Jan - Feb;13(1):100-108. doi: 10.1016/j.jacl.2018.11.008. Epub 2018 Dec 1. PubMed PMID: 30594443.

324. **Wong ND**, Shapiro MD. Interpreting the Findings From the Recent PCSK9 Monoclonal Antibody Cardiovascular Outcomes Trials. *Front Cardiovasc Med*. 2019 Mar 6;6:14. doi: 10.3389/fcvm.2019.00014. eCollection 2019. Review. PubMed PMID: 30895178; PubMed Central PMCID: PMC6414420.

325. Nørgaard CH, Mosslemi M, Lee CJ, Torp-Pedersen C, **Wong ND**. The Importance and Role of Multiple Risk Factor Control in Type 2 Diabetes. *Curr Cardiol Rep*. 2019 Mar 18;21(5):35. doi: 10.1007/s11886-019-1123-y. Review. PubMed PMID: 30887139.

326. Glovaci D, Fan W, **Wong ND**. Epidemiology of Diabetes Mellitus and Cardiovascular Disease. *Curr Cardiol Rep*. 2019 Mar 4;21(4):21. doi: 10.1007/s11886-019-1107-y. Review. PubMed PMID: 30828746.

327. Nandkeolyar S, Naqvi A, Fan W, Sharma A, Rana JS, Rozanski A, Shaw L, Friedman JD, Hayes S, Dey D, **Wong ND**, Berman DS. Utility of novel serum biomarkers to predict subclinical atherosclerosis: A sub-analysis of the EISNER study. *Atherosclerosis*. 2019 Mar;282:80-84. doi: 10.1016/j.atherosclerosis.2019.01.012. Epub 2019 Jan 24. PubMed PMID: 30711632.

328. Fan W, Song Y, Inzucchi SE, Sperling L, Cannon CP, Arnold SV, Kosiborod M, **Wong ND**. Composite cardiovascular risk factor target achievement and its predictors in US adults with diabetes: The Diabetes Collaborative Registry. *Diabetes Obes Metab*. 2019 May;21(5):1121-1127. doi: 10.1111/dom.13625. Epub 2019 Feb 14. PubMed PMID: 30609214.

329. Andary R, Fan W, **Wong ND**. Control of Cardiovascular Risk Factors Among US Adults With Type 2 Diabetes With and Without Cardiovascular Disease. *Am J Cardiol*. 2019 May 28. pii: S0002-9149(19)30602-2. doi: 10.1016/j.amjcard.2019.05.035. [Epub ahead of print] PubMed PMID: 31239072.

330. Tehrani DM, Fan W, Nambi V, Gardin J, Hirsch CH, Amsterdam E, deFilippi CR, Polonsky T, **Wong ND**. Trends in Blood Pressure and High-Sensitivity Cardiac Troponin-T with Cardiovascular Disease: The Cardiovascular Health Study. *Am J Hypertens*. 2019 Jun 21. pii: hpz102. doi: 10.1093/ajh/hpz102. [Epub ahead of print] PubMed PMID: 31232455.
331. **Wong ND**, Amsterdam EA, Ballantyne C, Khera A, Nasir K, Toth PP for the American Society for Preventive Cardiology. Spotlight from the American Society for Preventive Cardiology on Key Features of the 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA Guidelines on the Management of Blood Cholesterol. *Am J Cardiovasc Drugs* 2019 (in press)
332. Oni E, Budoff MJ, Zeb I, Li D, Veledar E, Polak JF, Blankstein R, **Wong ND**, Blaha MJ, Agatston A, Blumenthal RS, Nasir K. Nonalcoholic Fatty Liver Disease Is Associated With Arterial Distensibility and Carotid Intima-Media Thickness: (from the Multi-Ethnic Study of Atherosclerosis). *Am J Cardiol*. 2019 Aug 15;124(4):534-538. doi: 10.1016/j.amjcard.2019.05.028. Epub 2019 May 25. PubMed PMID: 31262497.
333. Hirahatake KM, Jacobs DR, Shikany JM, Jiang L, **Wong ND**, Steffen LM, Odegaard AO. Cumulative intake of artificially sweetened and sugar-sweetened beverages and risk of incident type 2 diabetes in young adults: the Coronary Artery Risk Development In Young Adults (CARDIA) Study. *Am J Clin Nutr*. 2019 Aug 2. pii: nqz154. doi:10.1093/ajcn/nqz154. [Epub ahead of print] PubMed PMID: 31374564.
334. Hirahatake KM, Jacobs DR Jr, Shikany JM, Jiang L, **Wong ND**, Odegaard AO. Cumulative average dietary pattern scores in young adulthood and risk of incident type 2 diabetes: the CARDIA study. *Diabetologia*. 2019 Dec;62(12):2233-2244. doi: 10.1007/s00125-019-04989-5. Epub 2019 Sep 2. PubMed PMID: 31478081.
335. Toth PP, Fazio S, **Wong ND**, Hull M, Nichols GA. Risk of cardiovascular events in patients with hypertriglyceridaemia: A review of real-world evidence. *Diabetes Obes Metab*. 2019 Nov 19. doi: 10.1111/dom.13921. [Epub ahead of print] Review. PubMed PMID: 31742844.
336. Hirahatake KM, Jiang L, **Wong ND**, Shikany JM, Eaton CB, Allison MA, Martin L, Garcia L, Zaslavsky O, Odegaard AO. Diet Quality and Cardiovascular Disease Risk in Postmenopausal Women With Type 2 Diabetes Mellitus: The Women's Health Initiative. *J Am Heart Assoc*. 2019 Oct;8(19):e013249. doi: 10.1161/JAHA.119.013249. Epub 2019 Sep 19. PubMed PMID: 31533514; PubMed Central PMCID: PMC6806027.

337. Mathenge N, Fan W, **Wong ND**, Hirsch C, Delaney CJ, Amsterdam EA, Koch B, Calara R, Gardin JM. Pre-diabetes, diabetes and predictors of incident angina among older women and men in the Cardiovascular Health Study. *Diab Vasc Dis Res*. 2019 Nov 28;1479164119888476. doi: 10.1177/1479164119888476. [Epub ahead of print] PubMed PMID: 31778070.

338. **Wong ND**, Toth PP, Amsterdam EA; American Society for Preventive Cardiology. Most important advances in preventive cardiology during this past decade: Viewpoint from the American Society for Preventive Cardiology. *Trends Cardiovasc Med*. 2019 Dec 6. pii: S1050-1738(19)30163-X. doi: 10.1016/j.tcm.2019.11.013. [Epub ahead of print] Review. PubMed PMID: 31882264.

339. Fan W, Philip S, Granowitz C, Toth PP, **Wong ND**. Residual Hypertriglyceridemia and Estimated Atherosclerotic Cardiovascular Disease Risk by Statin Use in U.S. Adults With Diabetes: National Health and Nutrition Examination Survey 2007-2014. *Diabetes Care*. 2019 Dec;42(12):2307-2314. doi: 10.2337/dc19-0501. Epub 2019 Oct 1. PubMed PMID: 31575639.

340. Cordola-Hsu A, Ames SL, Zie B, Peterson DV, Garcia L, Going SB, Phillips LS, Manson JE, Anton-Culver H, **Wong ND**. Incidence of Diabetes According to Metabolically Healthy or Unhealthy Normal Weight or Overweight/Obesity in Post-Menopausal Women: the Women's Health Initiative. *Menopause* 2020 (in press)

Books:

Wong ND (Editor-in-Chief), Black HR, Gardin JM, "Preventive Cardiology", McGraw Hill Publishers, New York, November 1999

Wong ND (Editor-in-Chief), Black HR, Gardin JM, "Preventive Cardiology: A Practical Approach" McGraw Hill Publishers, New York, 2005

Krentz A, Wong ND (Co-Editor), "Metabolic Syndrome and Cardiovascular Disease", Taylor and Francis, New York (1st edition) November 2006.

Blumenthal RS, Foody JM, Wong ND (Co-Editor), *Preventive Cardiology, A Companion to Braunwald's Heart Disease*, Elsevier, New York, February 2011

Blumenthal RS, Foody JM, Wong ND (Co-Editor), *Preventive Cardiology, A Companion to Braunwald's Heart Disease*, Simplified Chinese Translation, Elsevier (Singapore) Pte Ltd and Peking University Medical Press, 2013

Wong ND, Amsterdam EA, Blumenthal RS. *ASPC Manual of Preventive Cardiology*. Demos Medical Publishers, November 2014

Wong ND, Malik S. Diabetes and Cardiovascular Disease. Jaypee Brothers Medical Publishers, New Delhi, India, November 2014

Book Chapters:

1. Wong ND. Chapter B92. HYPERTENSION IN EAST ASIANS AND NATIVE HAWAIIANS. In Black HR, ed. Hypertension Primer, American Heart Association, 2003
2. Wong ND, Franklin SS. Chapter 3. Epidemiology of Hypertension. In: Oparil and Weber's Hypertension. Elsevier, Burlington, MA 2005
3. Detrano RC, Wong ND. Chapter 3. Multidetector and Electron Beam Computed Tomography of the Heart. In Dilsizian & Pohost: Cardiac CT, PET and MR. Blackwell Futura, Malden, MA, USA 2006.
4. Berman DS, Hachamovich R, Shaw LJ, Germano G, Wong ND, Rozanski A. Chapter 17. Nuclear Cardiology and Cardiac CT in Assessment of Patients with Known or Suspected Chronic Coronary Artery Disease. In Budoff M, ed: Cardiac CT Imaging : Diagnosis of Cardiovascular Disease, Springer 2006. Pages 239-259.
5. Wong ND. Chapter 41. Hypertension in East Asians and Pacific Islanders. In Black and Elliott's Hypertension: A Companion to Braunwald's Heart Disease, 1st ed. 2006.
6. Wong ND. Cardiovascular Disease. In: Boslaugh S, editor. Encyclopedia of Epidemiology. Sage Publications, Thousand Oaks, CA, 2008. Pages 118-131.
7. Hoang KC, Wong ND. Hypertension in East Asians and Native Hawaiians. Chapter 88. Hypertension Primer, 4th ed. American Heart Association 2008.
8. Goel R, Garg P, Achenbach S, Gupta A, Song JJ, Wong ND, Shaw LJ, Narula J. Coronary artery calcification and coronary atherosclerotic disease. In: Computed Tomography Imaging in 2012. Cardiology Clinics. Saunders, Philadelphia, 2012.
9. Wong ND. Epidemiology and Prevention of Cardiovascular Disease. In: Detels R, et al. eds Dictionary of Public Health. Oxford University Press. 2014 (in press).
10. Wong ND, Tehrani DM, Franklin SS. Epidemiology of coronary heart disease in the elderly. In: Aronow WS, Fleg JL, Rich MW eds Cardiovascular Disease in the Elderly. 5th Edition. CRC Press, 2013.
11. Boulous N, Wong ND. Epidemiology of Diabetes and Cardiovascular Disease. In: Diabetes and Cardiovascular Disease, Wong ND, Malik S, eds. Jaypee Brothers Medical Publishers, New Delhi, India, 2014.

12. Barrett-Connor E, Wingard D, Wong N, Goldberg R. Chapter 18. Heart Disease and Diabetes. In: Diabetes in America, 2018.
13. Wong ND, Franklin SS. Chapter 23. Epidemiology of Hypertension. In: Hurst's The Heart, Fuster V, Harrington RA, Narula J, Eapen ZJ eds. Mc Graw-Hill, New York, 2017.
14. Wong ND, Tehrani DM, Franklin SS. Epidemiology of coronary heart disease in the elderly. In: Aronow WS, Fleg JL, Rich MW eds Cardiovascular Disease in the Elderly. 6th Edition. CRC Press (2018, in press).

Other Publications, Editorials, & Letters:

1. Wong ND. Clinical Determinants of Long-Term Risk for Reinfarction and Coronary Mortality Following Initial Myocardial Infarction: The Framingham Study. *Doctoral Dissertation, Yale University*, Copyright 1987, 277 pages.
2. Wong ND. Software review Mstat: A personal version of Systat. *Yale J Biol Med* 1989; 62: 237-8.
3. Bassin S, Davidson D, Morris GS, Wong N, Deitrick R. Assessing youngsters' predisposition to cardiovascular disease. Proceedings from Children and Exercise Pediatric Work Physiology XV, National Institute for Health Promotion, Budapest, Hungary, 1989.
4. Wong ND, Wilson PWF, Kannel WB. Significance of a persistent high cholesterol level after myocardial infarction. *Cardiology Board Review* 1992; 9(8): 28-40.
5. Wong ND, Wilson PWF, Kannel WB. Letter re: Serum cholesterol as a risk factor post-myocardial infarction. *Ann Intern Med* 1992; 116(5): 425-6.
6. Wong ND. Long-term care of the coronary patient by Risteard Mulcahy (book review). *Ann Intern Med* 1992; 117(6): 539-40.
7. Ettinger WH, Wahl PW, Bush TL, Manolio TA, Wong ND, Kuller LH, Tracy RP, Borhani NO, O'Leary DH. Letter re: Lipoprotein lipids in older people. *Circulation* 1993; 87(5): 1773.
8. Wong ND, Vo A, Abrahamson D, Tobis JM, Eisenberg H, Detrano RC. Can coronary artery calcium detected by ultrafast computed tomography diagnose coronary artery disease? *Cardiology Board Review* 1995; 12(4): 14-20.
9. Teng W, Abrahamson D, Wong ND. Coronary artery calcium: relation to age and hyperlipidemia. *Lipid Digest* 1994; 6: 7-11.
10. Franklin SS, Gustin W, Wong N, Weber M, Larson M, Kannel W, Levy D. The effect of age and hypertension on systolic, diastolic, mean, and pulse pressure: the Framingham Heart Study. *Current Concepts in Hypertension* 1999; 3: 3-4.
11. Wong ND. Reflections on cardiovascular risk stratification and prevention. *Preventive Cardiology* 2001; 4 (1): 7-8 .
12. Wong ND. Book review: Compliance in Healthcare and Research. *Preventive Cardiology Summer* 2002.

13. Franklin SS, Wong ND, Larson MG, Kannel WB, Levy D. How important is pulse pressure as a predictor of cardiovascular risk? *Hypertension*. 2002 Feb;39(2):E12-3
14. Franklin SS, Wong ND. Cardiovascular risk evaluation—an inexact science (editorial). *Journal of Hypertension* 2002; 20: 1-4 (editorial).
15. Franklin SS, Wong ND, Kannel WB. Age-specific relevance of usual blood pressure to vascular mortality. *The Lancet* 2003; 361: 1389 (editorial)
16. Berman DS, Wong ND. Implications of estimating coronary heart disease risk in the United States population (editorial). *J Am Coll Cardiol* 2004; 43: 1797-1798.
17. Wong ND, Malik S. C-reactive protein for cardiovascular risk assessment in the metabolic syndrome: response to Kholeif et al. *Diabetes Care* 2005; 28: 2598-9.
18. Wong ND. Section Editor. *Clinical Trials Report. Novel and Emerging Risk Factors in: Current Cardiovascular Risk Reports* 2008; 2: 129-32.
19. Hoang KC, Ghandehari H, Lopez VA, Barboza MG, Wong ND. Targeting therapy based on global risk assessment in metabolic syndrome. *Rev Endocrinol* Oct 2008; 1-4.
20. Wong ND. Should we focus on novel risk markers and screening tests to better predict and prevent cardiovascular disease? Or are we putting the cart before the horse? *Prev Cardiol* 2010; 13: 149-51.
21. Wong ND. AMERICAN SOCIETY FOR PREVENTIVE CARDIOLOGY (ASPC) Annual Debate: Coronary Heart Disease in Men and Women: Does One Size Fit All? *Clinical Cardiology* 2011; 34: 653.
22. Wong ND. Is diabetes really a coronary heart disease risk equivalent? *Cardiovascular Endocrinology* 2013; 1: 65-67.
23. Wong ND, Levy D, Narula J. Framingham Heart Study: An Enduring Legacy (editorial). *Global Heart* 2013; 8: 1-3.
24. Malik S, Wong ND. Sex differences in diabetes, heart disease and beyond. *Global Heart* 2013 (in press).
25. Wong ND, Patao C, Malik S, Iloeje U. Reply. *Am J Cardiol* 2014; 114(4):654-5.
26. Wong ND, Franklin SS. Reducing the burden of hypertension: China's long march ahead. *JAMA Intern Med* 2016; 176: 532-3.
27. Franklin SS, Wong ND. Pulse pressure: how valuable as a diagnostic and therapeutic tool? *J Am Coll Cardiol* 2016; 67: 404-6.
28. Wong ND. Is There More to the Calcium Scan Than Just Coronary Calcium? *JACC Cardiovasc Imag* 2016; 9(10):1186-1187.
29. Wong ND, Sperling LS, Baum SJ. The American Society for Preventive Cardiology: Our 30-year legacy. *Clin Cardiol*. 2016 39(11):627-630
30. Wong ND, Rosenblit PD, Lepor N. Cardiometabolism: endocrinologists and cardiologists working together to improve clinical outcomes. *Cardiosource World News, American College of Cardiology*, November 2016, pgs 40-43.
31. Wong ND. Cardiometabolism: the convergence of diabetes and cardiovascular disease (editorial). *Cardiovascular Endocrinology* 2017; 6: 2.
32. Wong ND. Does FOURIER Transform Residual Cardiovascular Disease Risk? *Am J Cardiol* 2017; 120(7):1220-1222.
33. Wong ND, Moran A, Narula J. Hypertension Control in Africa: A Call to Action. *Glob Heart*. 2018;13(1):1-2.

34. Wong ND. Can Interventions on Socioeconomic Status Improve Cardiovascular Health? Role for American Heart Association's Life Simple 7. *Glob Heart*. 2019 Apr 12. pii: S2211-8160(19)30016-X. doi: 10.1016/j.ghheart.2019.03.003. [Epub ahead of print] PubMed PMID: 30987811.
35. Wong ND. Coronary Calcium in Type 1 Diabetes: To Screen or Not to Screen? *JACC Cardiovasc Imaging*. 2019 Mar 8. pii: S1936-878X(19)30146-9. doi: 10.1016/j.jcmg.2019.01.016. [Epub ahead of print] PubMed PMID: 30878432.
36. Wong ND. Identifying the Very-High-Risk Atherosclerotic Cardiovascular Disease Patient: Does It Really Matter? *J Am Coll Cardiol*. 2019;74(20):2508-2510. doi: 10.1016/j.jacc.2019.09.023. PubMed PMID: 31727289.

Presentations (principal or senior author/presenter) at Local, National, and International Scientific Symposia * indicates N.D. Wong as principal or senior author (abstract citation in parenthesis)

*Society for Epidemiologic Research, Amherst, MA, June 1987 (*Am J Epidemiol* 1987; 126:741)

American Public Health Association, Washington D.C., October 1987 (*Am J Pub Health*)

*American Heart Association Scientific Sessions, Anaheim, November 1987 (*Circulation* 1987; 76:IV-322)

*American Heart Association Council on Epidemiology, Santa Fe, March 1988 (*CVD Epidemiology Newsletter*, Winter 1988)

*American College of Cardiology, Anaheim, March 1989 (*JACC* 1989; 18: 36A)

*International Scientific Conference on Epidemiology, Beijing, China, April 1989

2nd International Conference on Preventive Cardiology, Washington D.C., June 1989

American Federation for Clinical Research, New York, February 1990 (*Clin Res* 1990; 38: 130A)

*XI World Congress of Cardiology, Manila, February 1990 (*Phil J Cardiol* 1990; 19 (suppl 1): I-300 and I-398)

*Department of Medicine, Hunan Medical University, Changsha, China, February 1990

XIIth Congress of the European Society of Cardiology, 1990 (*Eur Heart J* 1990; 11: 388).

American Heart Association Scientific Sessions, Dallas, November 1990 (*Circulation* 1990; 82(4): III-227 and III-286.

*Fifth Cardiology Conference in Turin, Italy, January 1991

*Multiethnic Health Promotion Conference, Sacramento, CA, June 1991

Int'l Conference on Hyperlipidemia and Prevention of Atherosclerosis in Childhood, Bethesda, MD, May 1990 (*Ann NY Acad Sci* 1991; 623: 429-31).

*Southwest Lipid Metabolics Working Group, Newport Beach, CA, September 1991

*Ultrafast CT diagnostic Center and Polly Force, Ltd., Hong Kong, November 1991

*Zhejiang Medical University, Hangzhou, China, November 1991

American College of Cardiology, Dallas, March 1992 (*JACC abstract supplement*)

*Interamerican Congress of Cardiology, Orlando, May 1992

XIV Congress of the European Society of Cardiology, Barcelona, Spain, August 1992 (*Eur Heart J* 1992 suppl.)

*Advances in Ultrafast Computed Tomography, Burlingame, CA, October 1992
 American Heart Association Scientific Sessions, New Orleans, November 1992
 (Circulation 1992; 86(4)(suppl): I-440)
 *Lipid Metabolics Working Group, Marina Del Rey, November 1992
 *33rd Conference on Cardiovascular Epidemiology, American Heart Association, Santa Fe, March 1993 (Circulation 1993; 87(2): 692)
 *3rd International Conference on Preventive Cardiology, Oslo, Norway, June 1993
 *Advances in Ultrafast CT Electron Beam Technology, Miami, October 1993
 *2nd International Symposium on Coronary Artery Disease and Hypertension, Beijing, China, October 1993
 *Department of Epidemiology, Fu Wai Hospital Cardiovascular Institute, October 1993
 *American Heart Association Scientific Sessions, Atlanta, November 1993 (Circulation 1993; 88(4-II): I-15)
 *Southern California Lipid Working Group, Newport Beach, November 1993
 *Dyslipidemia, Diabetes, Hypertension, and Coronary Disease: New Developments, Costa Mesa, December 1993
 American College of Cardiology Scientific Sessions, March 1994 (JACC 1994; Feb.(suppl): 180A).
 *Orange County Endocrine Society, April 1994
 *5th Annual Scientific Sessions, American Society of Echocardiography, San Francisco, June 1994 (J Am Soc Echo 1994; 7(3): II-S62).
 *Southern California Lipid Working Group, December 1994
 *American Society for Artificial Internal Organs Cardiovascular Science and Technology Conference, Washington, DC, December 1994
 *Astra-Merck, Inc. Medical Affairs, Wayne, PA, December 1994
 *American Heart Association 35th Annual Conference on Cardiovascular Disease Epidemiology and Prevention, San Antonio, TX, March 1995 (Circulation 1995; 91(3))
 American College of Cardiology, New Orleans, March 1995 (JACC 1995 (Feb.): 12A and 387A)
 *Advances in Ultrafast CT 1995: International Symposium on Electron Beam Tomography, Scottsdale, AZ, October 1995 (Am J Cardiac Imag 1995; 9(4) suppl 1:6)
 *XII International Symposium on Drugs Affecting Lipid Metabolism, Houston, TX, November 1995
 68th Scientific Sessions, American Heart Association, Anaheim, CA, November 1995
 *Department of Medicine, Bir Hospital, Kathmandu, Nepal, May 1996
 *Tibet Institute for High Mountain Sickness and Cardiovascular Disease, Lhasa (Tibet), China, May 1996
 *4th International Conference on Preventive Cardiology, June 1997, Montreal, Canada
 (Blood Pressure Increases in Childhood are Related to Increased Left Ventricular Mass in Adolescence, and Noninvasive Assessment of Atherosclerosis by Electron Beam CT and Relation (Can J Cardiol 1997; 13 (supplb): 162, 277.
 Cardiovascular Health: Coming Together in the 21st Century, February 1998, San Francisco, CA (moderator and poster presenter)
 AHA Conference on Cardiovascular Epidemiology and Prevention, March 1998, Santa Fe, NM (moderator)

* Lectures in People's Republic of China: West China Medical University, Chengdu (Lipids), Xian Army Hospital, Xian (Lipids), and Beijing Hospital, Beijing (EBCT), July 1999

*Albert Schweitzer Institute for the Humanities Cardiovascular Disease Conference, Ulaan Bataar, Mongolia (Lipids, CVD Prevention in Women), September 1999

*5TH Internal Conference on Preventive Cardiology, May 2001, Osaka, Japan, abstract presentations on the following (Published in Japanese Journal of Cardiovascular Disease Prevention 2001; 36 (supplement), May 2001

- 1) Population Attributable Risk for Hypertension in the US Population: Relation to Age, Gender, Hypertensive Subtype, and Stage
- 2) Indicators of Chest Pain and Myocardial Ischemia in Post-Menopausal Women
- 3) Inflammation, Risk Factors and Coronary Heart Disease Risk in the US Population
- 4) Coronary Calcium Evaluation of Subclinical Disease: Is It a Useful Screening Tool?

*Co-Chair, The New National Cholesterol Education Program Guidelines: Implications and Implementation, Foundation for the Prevention of Cardiovascular Disease and Stroke, Santa Monica, CA, June 9-10, 2001

*Wong ND, Schreiner PJ, Jacobs DJ, Hilner JE, Loria CM, Detrano RC. Relation of baseline and longitudinal changes in lipids over 15 years with coronary artery calcium: the CARDIA Study. Presented at the 42nd Conference on Cardiovascular Disease Epidemiology and Prevention, Honolulu, HI, April 24, 2002

Gardin JM, Iribarren C, Liu K, Schreiner PJ, Loria CM, Detrano RC, Wong ND. Relation of echocardiographic left ventricular mass, geometry, stress, and left atrial dimension with coronary calcium 10 years later in young adults: the CARDIA Study. Presented at the 42nd Conference on Cardiovascular Disease Epidemiology and Prevention, Honolulu, HI, April 24, 2002

*Wong ND. Coronary Calcium as a Surrogate Marker for Atherosclerosis: Implications in Clinical Trials. Invited presentation to the Society for Clinical Trials, May 2002, Washington DC

*Wong ND. Lectures on Prevention of Cardiovascular Disease and Nutrition in Prevention of Cardiovascular Disease. Presented at workshop on prevention of cardiovascular disease, Institut Municipal d'Investigacio Medica, Barcelona, Spain, organized by UC-Catalonia exchange program, June 2002

*Wong ND. Surrogate Measures of Atherosclerosis. Presented at cardiology conference, Department of Cardiology, Institute for Medicine, University of Barcelona, Spain, organized by UC-Catalonia exchange program, June 2002

*Wong ND – Co-chair, Workshop on Invasive and Non-invasive Methods for Global Risk Assessment, 6th Int'l Symposium on Global Risk of Coronary Heart Disease and Stroke, Florence, Italy, June 2002

*Wong ND. Computed tomography for the detection of coronary calcium: implications for risk assessment and measuring progression of atherosclerosis. Invited workshop presentation at the 6th Int'l Symposium on Global Risk of Coronary Heart Disease and Stroke. Florence, Italy, June 2002

*Wong ND, Sciammarella M, Miranda-Peats R, Whitcomb B, Gallagher A, Gransar H, Friedman J, Hayes S, Berman DS. Coronary risk estimation among persons with thoracic aortic versus coronary calcium. Presented at the 6th Int'l Symposium on Global Risk of Coronary Heart Disease and Stroke. Florence, Italy, June 2002

*Wong ND, Wong A, Elzarka S, Shamy D, Budoff MJ, Alimadadian H, Dalabarian H. Low density lipoprotein particle size: relation to emerging risk factors and coronary calcium. Presented at the 6th Int'l Symposium on Global Risk of Coronary Heart Disease and Stroke. Florence, Italy, June 2002

Detrano R, Anderson M, Nelson J, Wong N, Carr J, Bild D. Effect of scanner type and calcium measure on the re-scan variability of calcium quantity by computed tomography. Presented at the 75th Scientific Sessions of the American Heart Association, Chicago, November 2002. *Circulation* 2002; 106: II-479 (abstract).

Daniell AL, Friedman JD, Ben-Yosef N, Wong ND, Miranda-Peats L, Ventresca MT, Hayes SW, Sciamarella MG, Berman DS. Concordance of coronary calcium estimation between multi-detector and electron beam CT. Presented at the 75th Scientific Sessions of the American Heart Association, Chicago, November 2002. *Circulation* 2002; 106: II-479 (abstract).

*Wong N, Kawakubo M, Qu W, Zhuang N, Azen S, Detrano R. Risk factors and baseline calcium score explain the dependence of coronary calcium progression on lipid treatment and control. Presented at the 75th Scientific Sessions of the American Heart Association, Chicago, November 2002. *Circulation* 2002; 106: II-480 (abstract).

Zhuang N, Qu W, Kawakubo M, Wong N, Detrano R. Baseline calcium score, not risk factors, drives long-term coronary calcium progression in adults. Presented at the 75th Scientific Sessions of the American Heart Association, Chicago, November 2002. *Circulation* 2002; 106: II-480 (abstract).

Kleisli T, Jacobs MJ, *Wong ND. Prevalence and treatment status of dyslipidemia among persons with diabetes. Presented at the 75th Scientific Sessions of the American Heart Association, Chicago, November 2002. *Circulation* 2002; 106: II-509 (abstract).

Schreiner PJ, Hulley SB, Jacobs DR, Hilner JE, Wong ND. 15-year trends in LDL: The CARDIA study. Presented at the 75th Scientific Sessions of the American Heart Association, Chicago, November 2002. *Circulation* 2002; 106: II-751 (abstract).

*Wong ND, Pio JR, Franklin SS, L'Italien GJ, Kamath TV, Williams GR. Preventing coronary events by control of lipids and blood pressure in persons with the metabolic syndrome. Presented at the 52nd Annual Scientific Sessions of the American College of Cardiology, Chicago, March 2003. *J Am Coll Cardiol* 2003; 41 (Suppl A): 268A (abstract)

*Wong ND, Sciammarella M, Polk D, Gallagher A, Miranda-Peats R, Whitcomb B, Hachamovich R, Friedman J, Hayes S, Berman DS. The metabolic syndrome, diabetes, and subclinical atherosclerosis assessed by coronary calcium. Presented at the 52nd Annual Scientific Sessions of the American College of Cardiology, Chicago, March 2003. *J Am Coll Cardiol* 2003; 41 (Suppl A): 457A (abstract)

Daniell AL, *Wong ND, Friedman JD, Hayes SW, Miranda-Peats R, Hachamovich R, Polk D, Ben-Yosef N, Germano G, Berman DS. Reproducibility of coronary calcium measures from multidetector computed tomography. Presented at the 52nd Annual Scientific Sessions of the American College of Cardiology, Chicago, March 2003. *J Am Coll Cardiol* 2003; 41 (Suppl A): 457A (abstract)

*Wong ND. Metabolic syndrome and diabetes as a coronary heart disease risk equivalent. American Heart Association Special Populations Symposium, Beverly Hills, CA, April 2003

*Wong ND. Insulin resistance syndrome, diabetes, and coronary calcium. Insulin resistance syndrome: the 21st century's epidemic of diabetes and cardiovascular diseases. The Foundation for the Prevention of Cardiovascular Disease and Stroke, American College of Cardiology, California Chapter. San Francisco, May 2003.

*Wong ND. Coronary calcium as a surrogate measure for atherosclerosis: implications for clinical trials (invited presentation). 5th International Congress on Coronary Artery Disease, Florence, Italy, October 2003

*Wong ND, Gransar H, Arad Y, Polk D, Friedman J, Hayes S, Berman DS. Metabolic syndrome risk factors predict the likelihood of subclinical disease measured by coronary and aortic calcium (poster). 5th International Congress on Coronary Artery Disease, Florence, Italy, October 2003

*Wong ND, Franklin SS, Arad Y, Gransar H, Polk D, Friedman J, Hayes S, Berman DS. Relation of blood pressure and hypertensive patterns to coronary and aortic calcium (poster). 5th International Congress on Coronary Artery Disease, Florence, Italy, October 2003

Malik S, *Wong ND, Franklin SS, Kamath TV, L'Italien GJ, Williams GJ. Importance of number of metabolic syndrome risk factors in predicting cardiovascular disease and overall mortality in U.S. persons. American Heart Association Scientific Sessions, Orlando, FL, November 2003

Franklin SS, Pio JR, Wong ND, Larson MG, Leip EP, Vasan RS, Levy D. Pathways in the development of systolic hypertension. American Heart Association Scientific Sessions, Orlando, FL, November 2003

*Wong ND. Optimizing assessment of cardiovascular risk through noninvasive testing for atherosclerosis. Invited presentation at the South Asian Cardiac Society, Kathmandu, Nepal, February 2004.

Malik S, *Wong ND, Franklin SS, Pio J, Chen R, Fairchild C. Risk of cardiovascular disease in US persons with metabolic risk factors, diabetes, and elevated C-reactive protein (abstr). J Am Coll Cardiol 2004; 32 Suppl A: 23A. Presented at the 53rd Annual Scientific Session of the American College of Cardiology, March 2004, New Orleans, LA

Franklin SS, Pio J, Wong ND, Larson MG, Leip E, Vasan RS, Levy D. Predictors of Diastolic Hypertension. J Am Coll Cardiol 2004; 32 Suppl A (abstract). Presented at the 53rd Annual Scientific Session of the American College of Cardiology, March 2004, New Orleans, LA

*Wong ND. Coronary Calcium: To Scan or Not to Scan, or Who to Scan? Society of Cardiac Angiography and Interventions, San Diego, CA April 2004

*Wong ND, Gransar H, Rozanski AR, Dalbeck J, Miranda-Peats R, Hayes S, Shaw L, Friedman J, Polk D, Berman DS. Higher coronary calcium scores identify greater likelihood of myocardial ischemic in patients with metabolic syndrome. Presented at the American Heart Association Scientific Sessions, November 2004, New Orleans

*Wong ND, Gransar H, Polk D, Shaw L, Dahlbeck J, Hayes S, Berman DS. Association of metabolic risk factor burden with coronary, aortic, and aortic valve calcium. Presented at the American Heart Association Scientific Sessions, November 2004, New Orleans.

Kleisli T, Jacobs MJ, Pio HR, Malik S, L'Italien GJ, Chen RS, *Wong ND. Prevalence and treatment of dyslipidemia among persons with diabetes in the United States. Presented at the American Heart Association Scientific Sessions, November 2004, New Orleans

Vu JD, Vu JB, Pio JR, Malik S, Franklin SS, Chen R, *Wong ND. Impact of C-reactive Protein on the Likelihood of Peripheral Arterial Disease in US Adults with Metabolic Syndrome, Diabetes, and Pre-existing Cardiovascular Disease. Presented at the American Heart Association Scientific Sessions, November 2004, New Orleans

Franklin SS, Khan A, Pio JR, Wong ND. Significance of Isolated Diastolic Hypertension and its Relation to the Metabolic Syndrome. Presented at the American Heart Association Scientific Sessions, November 2004, New Orleans

*Wong ND. Co-chair and presenter, Epidemiology and Risk Assessment in the Metabolic Syndrome), metabolic syndrome symposium, American College of Cardiology Scientific Sessions, Orlando, CA March 2005

*Wong ND. Invited presentation, Metabolic Syndrome: Epidemiology, Risk Assessment, and Relation to Subclinical Atherosclerosis. 6th International Congress on Coronary Artery Disease, Istanbul, Turkey, October 2005

*Wong ND. Co-chair, oral contributions session on Subclinical Disease: Etiology and Prognosis, American Heart Association Scientific Sessions, Dallas, TX, November 2005

Miranda-Peats R, Kang X, Wong ND, Gransar H, Moon JH, Hayes SW, Friedman J, Berman DS. Relationships between hypertension and coronary, aortic valve, and mitral valve calcification. *Circulation* 2005; 112: II-609 (suppl 2). Presented at the American Heart Association Scientific Sessions, Dallas, TX, November 2005.

Shin VY, Johnson C, Jenny N, Wong N, Romero E, Detrano R. Serum Osteoprotegerin and Coronary Calcium. *Circulation* 2005; 112: II-799 (suppl 2). Presented at the American Heart Association Scientific Sessions, Dallas, TX, November 2005.

*Wong ND, Pio JR, Franklin SS, Tang S, Williams GR. Control of hypertension and dyslipidemia among patients with hypertension with and without metabolic syndrome, diabetes, and cardiovascular disease. *Circulation* 2005; 112: II-677 (suppl 2). Presented at the American Heart Association Scientific Sessions, Dallas, TX, November 2005.

*Wong ND, Moon JH, Kahute TA, Grandar H, Kang X, Polk D, Berman DS. IDF versus ATP3 Metabolic Syndrome Definitions in Relation to Subclinical Atherosclerosis Measured by Coronary Calcium: The Importance of Ethnicity/Gender Based Abdominal Obesity. *Circulation* 2005; 112: II-811 (suppl 2). Presented at the American Heart Association Scientific Sessions, Dallas, TX, November 2005.

Berger JS, Brown DL, Burke GL, Oberman A, Kistis JB, Langer RL, Wong ND, Wassertheil-Smoller S. The effect of aspirin treatment and dose on all-cause mortality and cardiovascular events in postmenopausal women with stable cardiovascular disease: the Women's Health Initiative Observational Study. *Circulation* 2005; 112: II-821 (suppl 2). Presented at the American Heart Association Scientific Sessions, Dallas, TX, November 2005.

*Wong ND, Lopez V, Pio JR, Tang S, Williams GR. Prevalence, Treatment Status, and Control of Concomitant Hypertension and Dyslipidemia in US Adults in 2001-2002.

Circulation 2005; 112: II-831 (suppl 2). Presented at the American Heart Association Scientific Sessions, Dallas, TX, November 2005.

*Wong ND. Co-Chair, Barriers to Quality of Care: Adherence and Poor Persistence (Oral Contributions), American College of Cardiology Scientific Sessions, Atlanta, GA, March 2006

*Wong ND. Co-Chair, Noninvasive Assessment of Atherosclerotic Burden (Symposium), American College of Cardiology Scientific Sessions, Atlanta, GA, March 2006

Katz R, Wong ND, Budoff MJ, et al. Features of the metabolic syndrome and diabetes mellitus as predictors of aortic valve calcification as detected by electron beam computed tomography in the Multiethnic Study of Atherosclerosis. JACC 2006 (suppl); 47: 287A (abstract). Presented at the ACC Scientific Sessions, Atlanta, GA, March 2006.

Hoang K, Lopez VA, Barboza MA, *Wong ND. Global risk assessment in the metabolic syndrome. JACC 2006 (suppl); 47: 310A (abstract). Presented at the ACC Scientific Sessions, Atlanta, GA, March 2006.

*Wong ND, Lopez VA, Franklin SS, et al. Prevalence, treatment and control of hypertension in US Adults 2001-2002 overall and with metabolic syndrome, diabetes, kidney disease, stroke or coronary artery disease. JACC 2006 (suppl); 47: 361A (abstract). Presented at the ACC Scientific Sessions, Atlanta, GA, March 2006.

*Wong ND, Lopez VA, Tang S, et al. Coronary heart disease events preventable by control of blood pressure and lipids in US persons with hypertension. JACC 2006 (suppl); 47: 299A (abstract). Presented at the ACC Scientific Sessions, Atlanta, GA, March 2006.

Vu JD, Barboza MG, Pio JR, Franklin SS, Wong ND* Blood pressure, vascular inflammation, and likelihood of cardiovascular and peripheral arterial disease in U.S. Persons. Circulation Journal (Japanese) 2006; 70 (Suppl 1): 405. Presented at the 70th Japanese Circulation Society, Nagoya, Japan, March 2006.

*Wong ND, Lopez VA, Tang S, Williams GR. Coronary heart disease events preventable by control of blood pressure and lipids in US adults with hypertension and dyslipidemia. Eur J Cardiovasc Prev Rehab 2006; 13 (suppl 1): S47. Presented at the EuroPREvent Congress, Athens, Greece, May 2006.

*Wong ND, Shaw L, Polk D, Berman D. Underidentification of persons at risk of coronary heart disease by global risk assessment: implications of subclinical disease screening. Eur J Cardiovasc Prev Rehab 2006; 13 (suppl 1): S66. Presented at the EuroPREvent Congress, Athens, Greece, May 2006.

Virmani R, Malik S, Burke A, Skorija K, Wong N, Kolodgie F, Finn A, Narula J. Vulnerable plaque pathology for imagers. *Circulation* 2006; suppl II (II-381). Presented at the American Heart Association Scientific Sessions, Chicago, IL, November 2006.

Polk DM, Kahute TA, Shaw LJ, Wong ND, Moon JH, Berman DS. B-type natriuretic peptide, subclinical atherosclerosis and prognosis. *Circulation* 2006; suppl II (II-725). Presented at the American Heart Association Scientific Sessions, Chicago, IL, November 2006.

*Wong ND, Allison M, Detrano R, Blumenthal R, Folsom A, Ouyang P, Criqui MH. Aortic calcium and systemic atherosclerosis in the Multiethnic Study of Atherosclerosis. *Circulation* 2006; suppl II (II-840). Presented at the American Heart Association Scientific Sessions, Chicago, IL, November 2006.

*Wong ND, Shaw L, Polk D, Gransar H, Moon J, Miranda-Peats L, Berman DS. Adiponectin, metabolic syndrome and subclinical atherosclerosis. *Circulation* 2006; suppl II (II-873). Presented at the American Heart Association Scientific Sessions, Chicago, IL, November 2006.

*Wong ND, Blumenthal R, Carr J, Guerci A, Kronmal R, Bertoni A, Tracy R, Saad M, Jacobs D, Liu K, Detrano R. Incidence and progression of coronary calcium associated with metabolic syndrome and diabetes in the Multiethnic Study of Atherosclerosis. *Circulation* 2006; suppl II (II-892). Presented at the American Heart Association Scientific Sessions, Chicago, IL, November 2006.

*Wong ND. Coronary Calcium Assessment: Methods and Implications. 17th Great Wall International Congress of Cardiology ACC Symposium: Cardiology Update 2006, Beijing, China

*Wong ND (Co-chair) . Common challenges in preventive cardiology (symposium), American College of Cardiology Scientific Sessions, New Orleans, March 2007.

Kahute TA, Bransar HB, Wong ND, Shaw LJ, Polk D, Moon JH, Miranda-Peats R, Berman DS. Waist-hip ratio is the strongest measure of abdominal obesity in the prediction of subclinical atherosclerosis as measured by coronary artery calcium in persons without multiple metabolic syndrome risk factors (abstract). *J Am Coll Cardiol* 2007; 49 (suppl A): 102A. Presented at the American College of Cardiology Scientific Sessions, New Orleans, March 2007.

Detrano RC, Guerci A, Carr JJ, Bild D, Burke GL, Folsom AR, Liu K, Shea S, Szklo M, Bluemke D, O'Leary DH, Tracy R, Watson K, Wong ND, Kronmal R. Coronary calcium predicts near-term coronary heart disease events in major American ethnic groups: the Multiethnic Study of Atherosclerosis. *J Am Coll Cardiol* 2007; 49 (suppl A): 101A. Presented at the American College of Cardiology Scientific Sessions, New Orleans, March 2007.

Lu LM, Wong ND, Gransar H, Miranda-Peats RS, Moon JH, Polk D, Berman DS. Dietary fat and subclinical atherosclerosis as detected by coronary artery calcium. . J Am Coll Cardiol 2007; 49 (suppl A): 121A. Presented at the American College of Cardiology Scientific Sessions, New Orleans, March 2007.

Tang SS, Lee E, Candrilli SD, Laird HJ, Levy SS, Bassin S, Wong ND. Prevalence, treatment and control of hypertension and/or dyslipidemia among Hispanic adults in US communities. Am Coll Cardiol 2007; 49 (suppl A): 279A. Presented at the American College of Cardiology Scientific Sessions, New Orleans, March 2007.

Lee E, Tang SS, Candrilli SD, Bassin S, Laird HJ, Levy SS, Wong ND. Regional differences in the prevalence of hypertension and dyslipidemia in US urban Hispanic populations. Am Coll Cardiol 2007; 49 (suppl A): 368A. Presented at the American College of Cardiology Scientific Sessions, New Orleans, March 2007.

Candrilli SD, Lee E, Tang SS, Bassin S, Laird HJ, Levy SS, Wong ND. Cardiovascular risk in US urban Hispanic populations: regional data from community outreach programs. Am Coll Cardiol 2007; 49 (suppl A): 410A. Presented at the American College of Cardiology Scientific Sessions, New Orleans, March 2007.

Gardin JM, Allebban Z, Wong ND, Sklar SK, Bess RL, Kurtz TW, Pershadsingh HA, Spence AM, Detrano RC. Differences in risk factor-adjusted subclinical cardiovascular disease in Mexican-Americans versus Non-Hispanic Caucasians: an echocardiographic / computed tomography study. Am Coll Cardiol 2007; 49 (suppl A): 412A. Presented at the American College of Cardiology Scientific Sessions, New Orleans, March 2007.

*Wong ND. Framingham, PROCAM and Where Do We Image? CT/MRI Symposium. Cannes, France April 2007

*Wong ND. Metabolic syndrome, subclinical atherosclerosis and cardiovascular risk. Invited presentation at the 13th World Congress on Heart Disease, Vancouver, BC, July 2007.

*Wong ND. Coronary and aortic calcium assessment: implications for evaluating cardiovascular disease risk. Poster presentation at the 13th World Congress on Heart Disease, Vancouver, BC, July 2007.

Lee HM, Lopez VA, Le TH, Wong ND. Association of forced vital capacity to C-reactive protein in adults with metabolic syndrome and diabetes. Presented at the American College of Chest Physicians, Chest 2007, Chicago, Illinois, October 2007.

Lee HM, Lopez VA, Le TH, Wong ND. Association of forced vital capacity with cardiovascular disease in persons with and without metabolic syndrome and diabetes in

United States adults. Presented at the American College of Chest Physicians, Chest 2007, Chicago, Illinois, October 2007.

Ghandehari H, Kamal-Bahl S, Wong ND. Goal Attainment for LDL-C, HDL-C, Triglycerides, and All Lipids in U.S. Adults: National Health and Nutrition Examination Survey 2003-2004. American Heart Association Scientific Sessions, Orlando, FL, November 2007.

Wong ND, Shaw LJ, Gransar H, Polk D, Rozanski A, Thomson L, Friedman JD, Hayes S, Berman DS. B-type Natriuretic Peptide, Subclinical Atherosclerosis, and Inducible Myocardial Ischemia. American Heart Association Scientific Sessions, Orlando, FL, November 2007.

Ibebuogu UN, Wong ND, Ramirez J, Mao S, Hajsadeghi F, Gopal A, Flores FR, Budoff MJ. Association Of The Metabolic Syndrome, Diabetes And Framingham Risk Score With Coronary Artery Calcium. American Heart Association Scientific Sessions, Orlando, FL, November 2007.

Thoracic Aortic Calcium vs. Coronary Artery Calcium for the Prediction of Coronary Heart Disease and Cardiovascular Events. * Wong ND, Gransar H, Shaw LJ, Polk D, Moon J, Miranda-Peats R, Hayes S, Friedman JD, Thomson L, Rozanski A, Berman DS. American Heart Association Scientific Sessions, Orlando, FL, November 2007.

Budoff MJ, Nasir K, McClelland R, Detrano R, Wong ND, Blumenthal RS, Kondos G, Chung H, Kronmal RA. Coronary Calcium Predicts Events Better With Absolute Calcium Scores Than Age-gender Percentiles - The Multi-ethnic Study Of Atherosclerosis. American Heart Association Scientific Sessions, Orlando, FL, November 2007.

Berman DS, Miranda Peats RS, Gransar H, Shaw LJ, Polk D, Thomson LE, Hayes SW, Friedman JD, Rozanski A, Budoff M, Wong ND. Underidentification of Need for Statin Therapy by ATP III NCEP Risk Assessment Compared to SHAPE Guidelines. American Heart Association Scientific Sessions, Orlando, FL, November 2007.

Allison MA, Budoff M, Wong ND, Blumenthal RS, Schreiner P, Criqui MH. Acculturation is a Risk Factor for Higher Carotid Intimal Medial Thickness in Hispanic Americans. The Multi-Ethnic Study of Atherosclerosis. American Heart Association Scientific Sessions, Orlando, FL, November 2007.

Criqui MH, Allison MA, Carr JJ, Cushman M, Detrano R, Kamineni A, Kronmal R, Post W, Wong N. Differential Cardiovascular Risk Factor Associations for Abdominal Aortic vs. Coronary Calcified Plaque by Computed Tomography (CT): the Multi-Ethnic Study of Atherosclerosis (MESA). American Heart Association Scientific Sessions, Orlando, FL, November 2007.

Malik S, Budoff MJ, Katz R, Blumenthal RA, Bertoni A, Nasir K, Szklo M, Barr RG, Wong N. Impact of Subclinical Atherosclerosis on Coronary Heart Disease Events in Persons with Metabolic Syndrome and Diabetes: the Multiethnic Study of Atherosclerosis. American Heart Association Scientific Sessions, Orlando, FL, November 2007.

*Wong ND. Metabolic syndrome and cardiovascular risk assessment. Invited presentation at Romanian Diabetes Federation, November 2007, Cluj-Napoca, Romania

*Wong ND. Clinical management of metabolic syndrome. Invited presentation at Romanian Diabetes Federation, November 2007, Cluj-Napoca, Romania.

*Wong ND. Biomarkers and Coronary Calcium. San Diego Biomarker Conference, sponsored by UC San Diego. San Diego, March 2008.

*Wong ND, Gransar H, Narula J, Shaw LJ, Polk D, Moon J, Miranda-Peats L, Berman DS. Myeloperoxidase, Subclinical Atherosclerosis, and Cardiovascular Disease Events. American College of Cardiology Scientific Sessions, Chicago, March 2008 and World Congress of Cardiology, Buenos Aires, May 2008

*Wong ND, Lopez VA, Tracy R, Yanez D, Kuller L, Burke G, Roberts CS, Solomon HA, Psaty BM. Impact of combined hypertension and dyslipidemia on the risk of coronary heart disease events in the elderly: the Cardiovascular Health Study, American College of Cardiology Scientific Sessions, Chicago, March 2008 and World Congress of Cardiology Buenos Aires, May 2008.

Bassin SL, Perez A, Lopez VA, *Wong ND. Prevalence of metabolic syndrome and associated risk factors and the impact of acculturation among multiethnic U.S. adolescents. Presented at the World Congress of Cardiology, Buenos Aires, May 2008.

Ghandehari H, Lee V, Kamal-Bahl S, Bassin SL, *Wong ND. Multiethnic Prevalence of Abdominal Obesity and Associated Risk Factors in U.S. Adults 2003-2004. Presented at the World Congress of Cardiology, Buenos Aires, May 2008.

Wong ND – Course Co-Director and Instructor (provided lectures in Preventive Cardiology), Cardiology Summer School, European Center for Peace and Development (ECPD), Sveti Stefan, Montenegro, June 2009.

Wong ND – Subclinical atherosclerosis and risk assessment – Severance Cardiovascular Hospital, Yonsei University, Seoul Korea, September 2009

Wong ND – Population studies in metabolic syndrome, diabetes, and CVD – Korean Lipid and Atherosclerosis Society, Seoul, Korea, September 2009

Wong ND – Implementation of Primary and Secondary Prevention Guidelines, International Conference on Cardiovascular Disease Prevention in South East Europe, Banja-Luka, Bosnia and Herzegovina, October 2009

Wong ND – Coronary Calcium Evaluation in Cardiovascular Risk Assessment, Great Wall Congress of Cardiology, Beijing, October 2009

Vulic D, Lee B, Carnethon M, Yanez D, Kaplan R, Suzuki T, *Wong ND – Metabolic syndrome, diabetes, inflammation and progression of carotid atherosclerosis. American Heart Association Scientific Sessions, Orlando, FL, November 2009

Mak GS, Lopez VA, Gardin JM, Gottdiener J, Yanez D, Psaty B, Lloyd-Jones D, *Wong ND – Progression of echocardiographic left ventricular mass and cardiovascular disease events in elderly adults: The Cardiovascular Health Study. American Heart Association Scientific Sessions, Orlando, FL, November 2009

Hoang K, Lee B, Gardin J, Carnethon M, Mukamal K, Yanez D, *Wong ND – Left ventricular mass as a predictor of cardiovascular disease events in elderly subjects with metabolic syndrome and diabetes. American Heart Association Scientific Sessions, Orlando, FL, November 2009

Malik S, Budoff M, Katz R, Blumenthal R, Bertoni A, Nasir K, Szklo M, Barr G, Wong ND. Utility of coronary artery calcium in identifying whether metabolic syndrome and diabetes are coronary heart disease risk equivalents. American Heart Association Scientific Sessions, Orlando, FL, November 2009

*Wong N, Gransar H, Rana JS, Kim J, Miranda-Peats R, Shaw L, Rozanski A, Thomson L, Hayes S, Berman DS. Utility of a Multiple Biomarker Index in Asymptomatic Adults on Atherosclerotic Burden. American College of Cardiology Scientific Sessions, March 2010.

*Wong ND – Course Co-Director and Instructor (provided lectures in Preventive Cardiology), Cardiology Summer School, European Center for Peace and Development (ECPD), Sveti Stefan, Montenegro, June 2010.

Glovaci D, *Wong N. Global risk assessment in US adults with diabetes. 50th Conference on Cardiovascular Epidemiology and Prevention, American Heart Association, San Francisco, CA, March 2010

*Wong ND, Gransar H, Rana JS, Kim J, Miranda-Peats, Shaw L, Thomson L, Hayes S, Friedman J, Berman DS. Multiple cardiovascular biomarker burden and subclinical atherosclerosis. 50th Conference on Cardiovascular Epidemiology and Prevention, American Heart Association, San Francisco, CA, March 2010

Glovaci D, *Wong N. Global risk assessment in US adults with diabetes. World Congress of Cardiology, Beijing, June 2010

*Wong N, Gransar H, Rana JS, Kim J, Miranda-Peats R, Shaw L, Rozanski A, Thomson L, Hayes S, Berman DS. Utility of a Multiple Biomarker Index in Asymptomatic Adults on Atherosclerotic Burden. World Congress of Cardiology, Beijing, June 2010.

Wong ND, Co-Chair and Speaker (lecture: Utility of subclinical CVD measures in stratifying CVD Risk), CSC-ASPC Joint Session: Optimizing assessment of cardiovascular risk: what does the future hold? World Congress of Cardiology, Beijing, June 2010

*Wong ND, Co-Chair and Speaker (lecture: Imaging strategies for risk assessment and prevention), Joint Forum of CSC-Preventive Cardiology Committee and ASPC-New Vision: CVD Risk and Risk Factor. 21st Great Wall Congress of Cardiology, Beijing, October 2010

Glovaci D, Wong K, Wygant G, Kan H, Malik S, Franklin S, Wong ND. Inadequate control of cardiovascular risk factors and prevalence of comorbidities in insulin and non-insulin treated and untreated subjects with type 2 diabetes in the United States 2003-2006. Presented at the American Heart Association Scientific Sessions, Chicago, November 2010.

*Wong ND. Noninvasive Imaging of Subclinical Atherosclerosis: What is its Role in Atheroprevention? Invited presentation at the American Heart Association Scientific Sessions, Chicago, November 2010.

*Wong ND. Invited lectures on DM and Cardiometabolic Syndrome, Statins in Acute Coronary Syndromes: Is Sooner Better?, and Imaging for Prevention: Is There a Role Beyond Risk Assessment. 22nd Saudi Heart Association, Riyadh, Saudi Arabia, February 2011.

Bilhorn KR, Lee BT, *Wong ND. HDL-Cholesterol, Inflammation and Cardiovascular Risk in US Adults. Abstract presented at the American Heart Association Cardiovascular Epidemiology and Prevention Scientific Sessions, Atlanta, GA, March 2011.

Donohue A, Glovaci D, Gardin JM, Gottdiener J, Suzuki T, *Wong N. Echocardiographic measures of systolic and diastolic function as predictors of incident heart failure in metabolic syndrome and diabetes. Abstract presented at the American College of Cardiology Scientific Sessions, New Orleans, LA, April 2011.

Bilhorn KR, Lee BT, *Wong ND. High density lipoprotein cholesterol, inflammation, and coronary heart disease death in United States adults. Abstract presented at the American College of Cardiology Scientific Sessions, New Orleans, LA, April 2011.

*Wong ND. Invited lectures at the Asian Pacific Society of Cardiology: 1) Targets for dyslipidemia in primary and secondary prevention and the role of hs-CRP, 2) How to design and start a research project, 3) Do biomarkers and screening for subclinical atherosclerosis improve cardiovascular disease risk prediction, and 4) Obesity, diabetes and cardiovascular disease: epidemiology and guidelines for management of cardiometabolic risks. Kuala Lumpur, Malaysia, May 2011

*Wong ND. Invited lectures at the Joint Meeting of Taif 19th Annual Cardiovascular Conference and Taif 5th Annual Diabetes Conference: Diabetes and Cardiovascular Continuum: 1) Metabolic syndrome, diabetes and cardiovascular disease: reducing cardiometabolic risks and 2) Imaging for prevention: what is the role in cardiovascular risk assessment? Taif, Saudi Arabia, May 2011

* Wong ND. Faculty panel, Cardiovascular Risk Prevention, American Society for Preventive Cardiology / American Society for Hypertension / National Lipid Association joint symposium. New York, May 2011.

* Wong ND. Dyslipidemia, Metabolic Syndrome and Cardiovascular Disease: Evidence, Evaluation and Management. 10th Congress of the European Association for Clinical Pharmacology and Therapeutics, Budapest, Hungary, June 2011.

*Wong ND – Course Co-Director and Instructor (provided lectures in Preventive Cardiology), Cardiology Summer School, European Center for Peace and Development (ECPD), Sveti Stefan, Montenegro, June 2011.

*Wong ND – Imaging for Prevention: What is the Role in Cardiovascular Risk Assessment? (invited lecture) 16th World Congress on Heart Disease, Vancouver, BC, Canada, July 2011, and session co-chair on prevention

Donohue AM, Glovaci D, Gardin JM, Gottdiener JS, Suxuki T, *Wong N. Echocardiographic measures of systolic and diastolic function as predictors of incident heart failure in metabolic syndrome and diabetes (abstract oral presentation). 16th World Congress on Heart Disease, Vancouver, BC, Canada, July 2011.

*Wong ND. “Psychosocial Factor and Cardiovascular Disease”, sponsored by the Academy of Sciences and Arts, Republic of Srpska, Bosnia and Herzegovina, September 2011.

*Wong ND. Biomarkers in Cardiovascular Risk Assessment. 22nd Great Wall International Congress of Cardiology, Beijing, China, October 2011.

*Wong ND (co-chair). ASPC Joint Session: Populationwide Efforts for the Reduction of Cardiometabolic Risks. The Epidemic of Cardiometabolic Risk. 22nd Great Wall International Congress of Cardiology, Beijing, China, October 2011

*Wong ND, Neff DR. Inadequate lipid target achievement among US treated adults with dyslipidemia (abstract poster presentation). American Heart Association Scientific Sessions, Orlando, FL, November 2011.

*Wong ND, Iloeje U. Trends in control of weight and cardiovascular risk factors among US adults with Type 2 diabetes mellitus (T2DM) in the National Health and Nutrition Examination Survey 1999-2008. American Heart Association Scientific Sessions, Orlando, FL, November 2011.

Okerson T, Wong ND. Reduction in 10-year Framingham Risk of Cardiovascular Disease in Obese Patients Undergoing Laparoscopic Adjustable Gastric Banding. American Heart Association Scientific Sessions, Orlando, FL, 2011.

Budoff MJ, Wong ND. Progression of coronary calcium and incident coronary heart disease events: the Multiethnic Study of Atherosclerosis (MESA). American Heart Association Scientific Sessions, Orlando, FL, November 2011

Wong ND. Invited Lectures on Imaging of Subclinical Atherosclerosis for Prevention, Does HDL-C Intervention Prevent Atherosclerosis? Evidence, Controversy and Newer Therapies, Non-Communicable Disease Epidemic: Metabolic Syndrome, Diabetes and CVD: Priorities for Prevention, and ABC's of Clinical Management in Diabetes for Prevention of CVD: Does Tight Control of A1c, Lipid and Blood Pressure Matter? The 7th International Cardiac Congress, Saud Al-Babtain Cardiac Center, Dammam, Saudi Arabia, February 2012.

Wong ND. Invited Lecture: Evidence Based Lifestyle Recommendations. National Lipid Association Scientific Sessions, San Diego, CA, March 2012

Wong ND. Co-chair, Dubai Course in Preventive Cardiology for Cardiology Trainees and Medical Students, lecture on Biomarkers and Imaging Techniques – Do they Improve Prediction of CVD and What are the Recommendations? World Congress of Cardiology, Dubai, April 2012

Wong ND. Invited lectures on Prevalence of Metabolic Syndrome in Developing Countries, Preventing Obesity and Risk for Cardiometabolic Disease: Innovative Individual and Family Based Approaches, and Preventive Cardiology Training and Education: Reaching Out from the USA. World Congress of Cardiology, Dubai, April 2012.

Wong ND. Invited lecture: Imaging for Prevention. 3rd Congress of the Republic of Srpska Society of Cardiology, Banja-Luka, Bosnia and Herzegovina, June 2012

Wong ND. Invited lecture: Screening for CVD in Metabolic Syndrome and Diabetes. 17th World Congress on Heart Disease, International Academy of Cardiology, Toronto, Ontario, CN, July 2012

Wong ND. Invited lectures on Metabolic syndrome, diabetes, and CVD: ABC's of management, research study design and statistics for outcome studies, and imaging strategies in CVD assessment and prevention. The 6th Qianjiang International Cardiovascular Congress, Hangzhou, China, August 2012

Wong ND*, Luo Y, Allison M, Budoff M, Nasir K, Blumenthal R, Burke R, O'Leary D, Criqui M. Multisite atherosclerosis and cardiovascular event risk: the Multiethnic Study of Atherosclerosis. American Heart Association Scientific Sessions, Los Angeles, CA, November 2012.

Wong ND*, Patao C, Malik S, Iloeje U. Preventable CHD events from optimal control of cardiovascular risk factors in US adults with diabetes. American Heart Association Scientific Sessions, Los Angeles, CA, November 2012.

Wong ND* Epidemiology and Prevention of Cardiovascular Disease in Diabetes: Is Diabetes a CHD Risk Equivalent? Diabetology Congress of Republic of Srpska, Banja Luka, Bosnia and Herzegovina, March 2013.

Wong ND* Screening for subclinical atherosclerosis in prevention of CVD. EuroPrevent 2013. Rome, Italy, April 2013.

Wong ND* Metabolic syndrome, Diabetes, and Strategies for Prevention of CVD. Israel Heart Society, Jerusalem, Israel, April 2013.

Wong ND* Is Diabetes Really a CHD Risk Equivalent. World Congress on Heart Disease, Annual Scientific Sessions, Vancouver, Canada, July 2013.

Wong ND* Evidence-Based Guidelines for Cardiovascular Risk Assessment. 7th Qianjiang International Cardiovascular Conference, Hangzhou, China, August 2013

Wong ND* Lipid Lowering Beyond LDL-C: Role of HDL-C. 7th Qianjiang International Cardiovascular Conference, Hangzhou, China, August 2013

Wong ND* Coronary Calcium Evaluation in Cardiovascular Risk Assessment. Cardiology Department, Zhejiang Provincial Hospital, Hangzhou, China, August 2013.

Wong ND* Does Intervention on HDL-C Have a Role in CVD Prevention? Evidence and Implications of Latest Clinical Trials. 13th Annual Maui Symposium, Wailea, Maui, October 2013.

Wong ND* Does Intervention on HDL-C Have a Role in CVD Prevention? Evidence and Implications of Latest Clinical Trials. Great Wall International Congress of Cardiology, Beijing, China, October 2013.

Wong ND* Evidence Based Guidelines for CVD Risk Assessment. Great Wall International Congress of Cardiology, Beijing, China, October 2013.

Wong ND* Dyslipidemia and CVD Prevention Beyond Statins: Novel Therapies for Targeting LDL-C and HDL-C, Serbian Congress of Cardiology, Zlatibor, Serbia, October 2013

Wong ND* Evidence-Based Cardiovascular Risk Assessment: Global Risk Assessment, Biomarkers and Screening for Atherosclerosis, Serbian Congress of Cardiology, Zlatibor, Serbia, October 2013

Wong ND* Global Risk Assessment from Framingham to the Latest Guidelines –What Scoring System should be Use? Saudi Prevent Conference 2014, Dammam, Saudi Arabia, January 2014

Wong ND* Screening for Atherosclerosis in Asymptomatic Patients: Implications of New Guidelines. Saudi Prevent Conference 2014, Dammam, Saudi Arabia, January 2014

Wong ND* HDL-C and Cardiovascular Disease: Implications from Recent Trials and Should This Still be a Target. Saudi Prevent Conference 2014, Dammam, Saudi Arabia, January 2014

Wong ND*, Hui G, Calara R, Koch B. Angina prevalence and characteristics in coronary artery disease patients with and without diabetes. American College Scientific Sessions, March 2014, Wash DC (poster).

Wong ND*. Panelist, Late Breaking Clinical Trials Session. American College of Cardiology Scientific Sessions, March 2014, Wash DC

Wong ND*. Invited lectures, World Congress of Cardiology, Melbourne, May 2014: AHA Life's Simple 7, Epidemiological Studies of CHD and Evolution of Preventive Cardiology, Cardiovascular Risk Assessment and Evaluating of Subclinical Atherosclerosis, ACC/AHA Cholesterol Management Guidelines, and Hypertension Management: An Outlook from Different World Regions and How to Address It

Wong ND*. Cardiovascular Risk Assessment. 3rd Annual American Society for Preventive Cardiology Cardiovascular Disease Prevention Conference, Boca Raton, Florida, July 2014.

Wong ND*. ACC/AHA Cardiovascular Risk Assessment Guidelines. World Congress on Heart Disease, International Academy of Cardiology, Boston, MA, July 2014.

Wong ND*. ACC/AHA Prevention of Cardiovascular Disease Guidelines. Hangzhou Provincial Hospital, Hangzhou, China, August 2014

Wong ND*. Invited lectures on ACC/AHA Prevention of Cardiovascular Disease Guidelines at Seoul Boramae Hospital affiliated to Seoul National University and International Korean Lipid and Atherosclerosis Conference, Seoul Korea, September 2014

Wong ND*. Invited lectures on Cardiovascular Risk Assessment, Diabetes and Cardiovascular Disease, and ACC/AHA Prevention of Cardiovascular Disease Guidelines, 2nd Conference on Cardiovascular Disease Prevention, Fusion Conferences, El Jadida, Morocco, September 2014.

Wong ND* Invited lecture on ACC/AHA Guidelines for Cardiovascular Risk Assessment. UCSD Biomarker Conference, La Jolla, CA, March 2015.

Wong ND* Invited lecture and chairperson, Cardiovascular Drug Safety: The Assumed Risk..... European Society of Cardiology, London, September 2015.

Wong ND* Invited lectures, ACC/AHA Cardiovascular Risk Assessment and Cholesterol Guidelines, Serbian Congress of Cardiology, Zlatibor, Serbia, October 2015

Wong ND* Invited lectures, ACC/AHA Cardiovascular Risk Assessment Guidelines and Screening for CVD in Diabetes, XXV Interamerican Congress of Cardiology, Santiago, Chile, December 2015.

Wong ND* Invited lectures, 1) PCSK9 monoclonal antibody therapy for management of dyslipidemia: from bench to bedside and 2) ACC/AHA cardiovascular risk assessment guidelines: role of coronary calcification and assessment of subclinical atherosclerosis. AHA@ CSI session, 67th Annual Conference on Cardiological Society of India, Chennai, India, February 2016.

Wong ND* Invited lectures, 1) Update on ACC/AHA guidelines for prevention of cardiovascular disease and cholesterol management and 2) Screening for cardiovascular disease in diabetes, Kuwait Medical Association Updates in Medicine, Kuwait City, Kuwait, March 2016.

Wong ND*, Schein E, Magyar AJ, Delaney JA, Hirsch CH, Gardin JM, Calara F, Koch B. Cardiovascular Event Risk Associated with Angina in Older Persons with Pre-Diabetes and Diabetes. American College of Cardiology Scientific Sessions, Chicago, April 2016 (poster)

Wong ND* Invited lectures: ACC/AHA Prevention of Cardiovascular Disease Guidelines; Promoting Cardiovascular Health in the Patient, the Community and Globally. 4th Congress of the Republic of Srpska Society of Cardiology, Teslic, Bosnia and Herzegovina May 2016.

Wong ND* Invited lectures and session co-chair: Life's Simple 7 and Promoting Cardiovascular Health in Women; Cardiac Rehabilitation in the United States; Prevalence, treatment and control of hypertension and dyslipidemia in China in adults with and without cardiovascular disease or diabetes: results from the multinational Pan-Asia Dyslipidemia and Hypertension Diagnosis and Treatment Gap Assessment Study (PANDA) (abstract – poster), World Congress of Cardiology, Mexico City, June 2016.

Wong ND* Invited lecture: PCSK9 Monoclonal Antibody Therapy: From Bench to Bedside. World Congress on Heart Disease, Boston, MA July 2016. Efficacy of a Behavioral Intervention Program on Progression of Atherosclerosis (abstract).

Wong ND* ASCVD Prevention in Patients with Diabetes and Cardiometabolic Risk. American College of Cardiology and Chinese Society of Cardiology Prevention Program. Xian, China, August 2016.

Wong ND* ACC/AHA Prevention of Cardiovascular Disease Guidelines. 18th Annual Congress of the Chinese Society of Cardiology. Xian, China, August 2016.

Patel RJ, Desai C, Lee C, Oh SM, Wong ND. Evaluation of the American Heart Association's Check Change Control™ Blood Pressure Control Program (poster). AHA Conference on Cardiovascular Disease Epidemiology and Lifestyle, Phoenix, AZ, March 2016 and AHA Scientific Sessions, New Orleans, LA, November 2016 (Best of AHA Subspecialty Poster Session).

Wong ND* PCSK9 mAb Therapy from Bench to Bedside and Reducing Diabetic Cardiovascular Risks. CardioEgypt 2017, Cairo, Egypt, February 2017.

Wong ND* Comparing the ACC/AHA and ESC Cholesterol Management Guidelines. 34th Consortium Chapter, American College of Cardiology, Serbian Cardiology Society and Republic of Srpska Society of Cardiology, Belgrade, Serbia, March 2017.

Wong ND* Cardiovascular Risk Assessment and Subclinical Atherosclerosis Screening. University of Timisoara "Victor Babes", March 2017.

Wong ND* Symposium moderator and poster session moderator, American Diabetes Association, San Diego, CA, June 2017

Wong ND* Co-Director / Presenter - Summer School on Cardiovascular Diseases, European Center for Peace and Development, Montenegro, June 2017

Wong ND* Biomarkers: Do they Have a Role in Risk Prediction? Society for Cardiovascular Computed Tomography, Washington, DC, July 2017

Wong ND* Epidemiology of Cardiovascular Disease in Diabetes and Metabolic Syndrome. First Heart in Diabetes Conference, Philadelphia, PA, July 2017

Wong ND* Evolocumab Latest Clinical Trials, Metabolic Syndrome and Cardiovascular Disease: Evaluation and Prevention, and Interpreting Statistical for Clinical Lipidology, International Conference on Lipids and Atherosclerosis / Korean Society for Lipids and Atherosclerosis, Seoul, September 2017

Wong ND* ASCVD Prevention in Patients with Diabetes and Cardiometabolic Risk, American College of Cardiology, Emirates Society of Cardiology (Dubai, October 2017), and Russian Society of Cardiology (Kazan, Russia, October 2017)

Wong ND* Invited Presentations on Global Cardiovascular Disease Prevention and Risk Estimation in the Russian Population, Oral Abstract Presentations on Predictors of Atherosclerotic Cardiovascular Disease Risk in Subjects with Diabetes with and without Cardiovascular Disease: The ACCORD Study and Coronary Artery Calcium and Mortality from Coronary Heart Disease, Cardiovascular Disease, and All Causes in Women vs. Men with Diabetes: The Coronary Calcium Consortium, American Heart Association Scientific Sessions, November 2017, Anaheim, CA

Wong ND* Epidemiology of Diabetes and Cardiovascular Disease, American College of Cardiology Pre-Conference, New York Symposium, New York, NY, December 2017

Wong ND* Co-Chair, ACC Prevention Webinar, Cairo, Egypt, March 2018

Wong ND* Cardiovascular Risk Assessment Beyond Global Risk Scoring: From Biomarkers to Subclinical Atherosclerosis. Europrevent 2018, European Association of Preventive Cardiology, Ljubljana, Slovenia, April 2018.

Wong ND* Moderator for PCSK9 and Hypertension Sessions, National Lipid Association Scientific Sessions, Las Vegas, April 2018

Fan W*, Phillip S, Granowitz C, Toth PP, Wong ND. Residual hypertriglyceridemia in statin treated US adults. Oral abstract presentation, American Diabetes Association, June 2018.

Wong ND* Speaker, ASPC Experts Course, Session moderator, ASPC Congress, Santa Ana Pueblo, New Mexico, July 2018

Wong ND* Invited Speaker, lectures on cardiovascular risk assessment and PCSK9 monoclonal antibody therapy, Lipid Association of India lipidology course and congress, Delhi, India, August, 2018

Wong ND* Invited speaker, lecture on cardiovascular risk assessment and PCSK9 monoclonal antibody therapy, Korean Lipid and Atherosclerosis Society, Seoul, Korea, August 2018

Wong ND* Invited speaker, lecture on cardiometabolism, 8th Western China Diabetes Forum, Shanxi, China, September 2018

Wong ND* Invited speaker, lectures on cardiovascular risk assessment and clinical trials, Zhejiang 2nd Affiliated Hospital, September 2018 and cardiometabolism, Zhejiang Provincial Hospital, Hangzhou, China, September 2018.

Wong ND* Invited speaker, lecture on cardiometabolism, Chinese Society of Cardiology, Hangzhou, China, September 2018

Wong ND* Invited speaker, ACC Prevention Webinars on Diabetes and Cardiovascular Disease in Vietnam, Malaysia, Indonesia, Argentina, and Mexico. October and November 2018

Wong ND*Invited speaker, Biomarkers and cardiovascular disease, A4M World Congress, Las Vegas, NV, December 2018

Wong ND*Invited speaker, Cardiometabolism, Pacific Lipid Association Clinical Lipid Update, Portland, OR, February 2019

Wong ND* Poster presentation, Preventable cardiovascular events from empagliflozin, ACC Scientific Sessions, New Orleans, LA, March 2019

Wong ND*Invited speaker, Multisociety Cholesterol Guidelines, 34th ACC Consortium Chapter of Serbia and Republic of Srpska Societies of Cardiology PRACSIS Conference, Jahorina, Bosnia and Herzegovina, March 2019

*Wong ND – Webinar on Cardiometabolism, Knowledge to Practice (K2P), April 2019

Wong ND *Invited speaker, Cardiometabolism, Cholesterol Guidelines, 2nd Saudi Prevent, Jeddah, Saudi Arabia, April 2019

Fan W, Philip S, Granowitz G, Toth PP, Wong ND*, Prevalence of Triglycerides ≥ 135 mg/dL in the US Population, National Lipid Association, Miami, FL, May 2019

Fan W*, Wong ND, Poster presentation, Preventable cardiovascular events from liraglutide, American Diabetes Association Scientific Sessions, San Francisco, CA, June 2019

*Wong ND – Webinar on Coronary Calcium, Cleveland Heart Labs, June 2019

Wong ND*Invited speaker, CVD Risk Assessment, ASCP Experts Course, San Antonio, TX, July 2019

Wong ND* Invited speaker, Lipid Association of India, Delhi and Udaipur, August 2019

Wong ND* Invited speaker, European Society of Cardiology / World Congress of Cardiology, Paris, France, August-September 2019 – Reducing Cardiovascular Disease by 30% by 2030 by Obesity and Diet and Good Fats and Bad Fats and Cardiovascular Disease

Wong ND* Invited speaker, ACC Prevention Webinar, Quertaro, Mexico, September 2019

Wong ND*, Fan W, Philip S, Toth P, Granowitz C. Many Statin Treated Persons with Borderline Triglyceride Levels are at Risk of ASCVD (moderated poster). American Heart Association Scientific Sessions, Philadelphia, PA November 2019

Zhao Y, D'Agostino RB, Bertoni AG, Budoff MJ, Cain L, Correa A, Folsom A, Jacobs DR, Malik S, Selvin E, Watson KE, Wong ND*. Development and Validation of New Cardiovascular Disease Risk Scores for Patients with Diabetes Mellitus from a Pooled Cohort of the US Population (poster). American Heart Association Scientific Sessions, Philadelphia, PA November 2019

Yang P*, Zhao Y, Wong ND. Development of a Risk Score for Atrial Fibrillation in Adults with Diabetes: the ACCORD Study (oral presentation). American Heart Association Scientific Sessions, Philadelphia, PA November 2019

EXHIBIT B

Deaths: Final Data for 2017

by Kenneth D. Kochanek, M.A., Sherry L. Murphy, B.S., Jiaquan Xu, M.D., and Elizabeth Arias, Ph.D.,
Division of Vital Statistics

Abstract

Objectives—This report presents final 2017 data on U.S. deaths, death rates, life expectancy, infant mortality, and trends, by selected characteristics such as age, sex, Hispanic origin and race, state of residence, and cause of death.

Methods—Information reported on death certificates is presented in descriptive tabulations. The original records are filed in state registration offices. Statistical information is compiled in a national database through the Vital Statistics Cooperative Program of the National Center for Health Statistics. Causes of death are processed in accordance with the *International Classification of Diseases, 10th Revision*.

Results—In 2017, a total of 2,813,503 deaths were reported in the United States. The age-adjusted death rate was 731.9 deaths per 100,000 U.S. standard population, an increase of 0.4% from the 2016 rate. Life expectancy at birth was 78.6 years, a decrease of 0.1 year from the 2016 rate. Life expectancy decreased from 2016 to 2017 for non-Hispanic white males (0.1 year) and non-Hispanic black males (0.1), and increased for non-Hispanic black females (0.1). Age-specific death rates increased in 2017 from 2016 for age groups 25–34, 35–44, and 85 and over, and decreased for age groups under 1 and 45–54. The 15 leading causes of death in 2017 remained the same as in 2016 although, two causes exchanged ranks. Chronic liver disease and cirrhosis, the 12th leading cause of death in 2016, became the 11th leading cause of death in 2017, while Septicemia, the 11th leading cause of death in 2016, became the 12th leading cause of death in 2017. The infant mortality rate, 5.79 infant deaths per 1,000 live births in 2017, did not change significantly from the rate of 5.87 in 2016.

Conclusions—The age-adjusted death rate for the total, male, and female populations increased from 2016 to 2017 and life expectancy at birth decreased in 2017 for the total and male populations.

Keywords: mortality • cause of death • life expectancy • vital statistics

Highlights

Mortality experience in 2017

- In 2017, a total of 2,813,503 resident deaths were registered in the United States, yielding a crude death rate of 863.8 per 100,000 population.
- The age-adjusted death rate, which accounts for the aging of the population, was 731.9 deaths per 100,000 U.S. standard population.
- Life expectancy at birth was 78.6 years.
- The 15 leading causes of death in 2017 were:
 1. Diseases of heart (heart disease)
 2. Malignant neoplasms (cancer)
 3. Accidents (unintentional injuries)
 4. Chronic lower respiratory diseases
 5. Cerebrovascular diseases (stroke)
 6. Alzheimer disease
 7. Diabetes mellitus (diabetes)
 8. Influenza and pneumonia
 9. Nephritis, nephrotic syndrome and nephrosis (kidney disease)
 10. Intentional self-harm (suicide)
 11. Chronic liver disease and cirrhosis
 12. Septicemia
 13. Essential hypertension and hypertensive renal disease (hypertension)
 14. Parkinson disease
 15. Pneumonitis due to solids and liquids
- In 2017, the infant mortality rate was 5.79 infant deaths per 1,000 live births.
- The 10 leading causes of infant death were:
 1. Congenital malformations, deformations and chromosomal abnormalities (congenital malformations)



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Center for Health Statistics
National Vital Statistics System



NCHS reports can be downloaded from: <https://www.cdc.gov/nchs/products/index.htm>.

Table B. Number of deaths, percentage of total deaths, death rates, and age-adjusted death rates for 2017, percent change in age-adjusted death rates in 2017 from 2016, and ratio of age-adjusted death rates by sex and by race and Hispanic origin for the 15 leading causes of death for the total population in 2017: United States

[Crude death rates are on an annual basis per 100,000 population; age-adjusted rates are per 100,000 U.S. standard population; see Technical Notes in this report. Asterisks (*) preceding cause-of-death codes indicate they are not part of the *International Classification of Diseases, 10th Revision* (ICD-10); see Technical Notes. Race and Hispanic-origin categories are consistent with 1977 Office of Management and Budget (OMB) standards]

					Age-adjusted death rate				
					Percent change		Ratio		
Rank ¹	Cause of death (ICD-10)	Number	Percent of total deaths, 2017	Crude death rate, 2017	2016 to 2017	Male to female	Non-Hispanic black ² to non-Hispanic white	Non-Hispanic white ² to Hispanic	
...	All causes.....	2,813,503	100.0	863.8	731.9	0.4	1.4	1.2	1.4
1	Diseases of heart..... (I00-I09,I11,I13,I20-I51)	647,457	23.0	198.8	165.0	-0.3	1.6	1.2	1.5
2	Malignant neoplasms..... (C00-C97)	599,108	21.3	183.9	152.5	-2.1	1.4	1.1	1.5
3	Accidents (unintentional injuries)..... (V01-X59,Y85-Y86)	169,936	6.0	52.2	49.4	4.2	2.1	0.8	1.7
4	Chronic lower respiratory diseases..... (J40-J47)	160,201	5.7	49.2	40.9	0.7	1.2	0.7	2.7
5	Cerebrovascular diseases..... (I60-I69)	146,383	5.2	44.9	37.6	0.8	1.0	1.4	1.1
6	Alzheimer disease..... (G30)	121,404	4.3	37.3	31.0	2.3	0.7	0.9	1.3
7	Diabetes mellitus..... (E10-E14)	83,564	3.0	25.7	21.5	2.4	1.6	2.1	0.7
8	Influenza and pneumonia..... (J09-J18)	55,672	2.0	17.1	14.3	5.9	1.3	1.1	1.3
9	Nephritis, nephrotic syndrome and nephrosis..... (N00-N07, N17-N19,N25-N27)	50,633	1.8	15.5	13.0	-0.8	1.4	2.2	1.0
10	Intentional self-harm (suicide)..... (*U03.X60-X84,Y87.0)	47,173	1.7	14.5	14.0	3.7	3.7	0.4	2.6
11	Chronic liver disease and cirrhosis..... (K70,K73-K74)	41,743	1.5	12.8	10.9	1.9	1.9	0.7	0.8
12	Septicemia..... (A40-A41)	40,922	1.5	12.6	10.6	-0.9	1.2	1.7	1.3
13	Essential hypertension and hypertensive renal disease..... (I10,I12,I15)	35,316	1.3	10.8	9.0	4.7	1.1	2.1	1.0
14	Parkinson disease..... (G20-G21)	31,963	1.1	9.8	8.4	5.0	2.3	0.5	1.5
15	Pneumonitis due to solids and liquids..... (J69)	20,108	0.7	6.2	5.1	-1.9	1.9	1.0	1.7
...	All other causes..... (residual)	561,920	20.0	172.5

... Category not applicable.

¹Rank based on number of deaths; see Technical Notes.

²Multiple-race data reported according to 1997 OMB standards were bridged to the single-race categories of 1977 OMB standards. For more information on areas reporting multiple race, see Technical Notes.

SOURCE: NCHS, National Vital Statistics System, Mortality.

EXHIBIT C

Trans Fatty Acids: Are the Effects Only Marginal?

Walter C. Willett, MD, DrPH, and Albert Ascherio, MD, DrPH

ABSTRACT

In the process of converting vegetable oils into solid fats, a process known as partial hydrogenation, some unsaturated bonds are converted to an unnatural *trans* position. In humans, *trans* fatty acids increase low-density lipoprotein cholesterol and decrease high-density lipoprotein cholesterol. In addition, positive associations between intake of *trans* fatty acids and coronary heart disease have been observed in epidemiological studies. The combined results of metabolic and epidemiological studies provide strong evidence that *trans* fatty acid intake is causally related to risk of coronary disease. Because the consumption of partially hydrogenated fats is almost universal in the United States, the number of deaths attributable to such fats is likely to be substantial. Federal regulations should require manufacturers to include *trans* fatty acid content in food labels and should aim to greatly reduce or eliminate the use of partially hydrogenated vegetable fats. (*Am J Public Health*. 1994;84:722-724)

At the turn of the century a process was discovered that uses heat in the presence of hydrogen and certain metal catalysts to convert natural liquid vegetable oils into solid fats.¹ This change in physical state occurs because some unsaturated bonds become saturated (fully hydrogenated) and others are converted from their natural *cis* to the *trans* position, creating straight molecules that pack together more solidly. Many of these molecules have never been encountered in nature. This process of partial hydrogenation was rapidly commercialized to create vegetable shortening, containing 30% to 40% *trans* fatty acids, at a cost lower than that of lard or other animal fats. Even by about 1910, per capita production of margarine and vegetable shortening was above 4 kg per year. Production rose steadily over the course of the century, further augmented by the substitution of margarine for butter, for both economic and purported (but undocumented) health benefits. Even though partially hydrogenated fats have continued to displace animal fats, per capita consumption of *trans* fatty acids from vegetable sources declined slightly from a peak of about 2.2% of calories in the 1960s because the level of hydrogenation was decreased to retain more of the original polyunsaturated fats. In the mid-1980s, consumption of *trans* fatty acids was estimated to average about 2.1% of total energy, although individual intakes can vary widely depending on food choices.

In the last several years major changes in *trans* fatty acid intake have occurred. Cooking oils were no longer partially hydrogenated after about 1985, and the major fast food chains switched from beef tallow to heavily hydrogenated oils containing 25% to 35% *trans* fatty acids for deep frying.² Also, an expensive public relations campaign by the US soybean

industry effectively displaced palm oil (a natural solid fat) with partially hydrogenated fats in innumerable processed foods. The profound increase in the use of partially hydrogenated fats over this century in the United States is now also being experienced by many Third World countries undergoing a transition from subsistence agriculture. In parts of India, for example, a partially hydrogenated vegetable fat containing more than 60% *trans* isomers is used to replace ghee (clarified butter), and elsewhere heavily hydrogenated fats designed to remain solid under tropical conditions have become basic food commodities.

Much of the success of *trans* fatty acids is due to the economic appeal of their longer shelf life and decreased expense compared with other fats. However, products containing *trans* fatty acids, especially margarine, have been heavily promoted on the basis of health claims. Such claims have never been substantiated; indeed, over many years, concerns have been expressed regarding possible adverse health effects of *trans* fatty acids. These concerns have arisen because these isomers are structurally similar to saturated fats, completely lack the essential metabolic functions of their parent polyunsaturated fats, and compete with the essential fatty acids in complex metabolic

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Editor's Note. See related editorial by Nestle (p 713) in this issue.

pathways.³ Also, consumption of partially hydrogenated vegetable fats has tracked closely in time with the epidemic of coronary heart disease in the United States and elsewhere.⁴ *Trans* fatty acids have increased serum total cholesterol levels in some, but not all, metabolic studies.⁵ A more general concern is that a major artificial element has been introduced into the food supply without a full understanding of all its metabolic and health implications. A report issued in 1985 did not find clear evidence that *trans* fatty acids were harmful, but it did indicate the need for further research.⁵

Recently, substantial new data on the health effects of *trans* fatty acids have become available. These findings are based on human metabolic studies of blood lipoprotein fractions (rather than just total serum cholesterol) and epidemiological studies relating intake of *trans* fatty acids to risk of coronary heart disease. In a seminal metabolic study, Mensink and Katan demonstrated that *trans* fatty acids increased low-density lipoprotein (LDL) cholesterol to a similar degree as did saturated fats.⁶ In contrast to other forms of fat, however, *trans* isomers decreased high-density lipoprotein (HDL) cholesterol; thus, the increase in the ratio of total cholesterol to HDL cholesterol for *trans* fatty acids was approximately double that for saturated fats. Similar adverse effects were confirmed in other studies.^{7,8} Unlike other fats, *trans* fatty acids were found to increase lipoprotein(a), another putative risk factor for coronary heart disease, in two of three studies.^{8,9}

Positive associations between intake of *trans* fatty acids and coronary heart disease have been observed in several epidemiological studies. Thomas et al. found higher levels of *trans* fatty acids in the adipose tissue of persons dying of myocardial infarction than in the tissue of persons with other causes of death.¹⁰ In a prospective study of nearly 90 000 women, intake of *trans* fatty acids from partially hydrogenated vegetable fats was associated with risk of myocardial infarction. The risk of women in the highest quintile of intake (median intake = 3.2% of total energy) was 1.8 (95% confidence interval = 1.1, 2.8) times that of women in the lowest quintile (median intake = 1.3% of total energy) after adjusting for standard risk factors and excluding those who had greatly increased or decreased their intake of margarine over the previous 10 years.¹¹ This risk is quantitatively higher than would be predicted by the effect of *trans* fatty acids on blood lipids, which is

compatible with the suggestion that *trans* fatty acids may have other adverse physiological effects, perhaps mediated by a prothrombotic mechanism.¹² A similar positive association between intake of *trans* fatty acids and risk of myocardial infarction was observed in a case-control study of men and women,¹³ and a positive association between blood levels of *trans* fatty acids and coronary narrowing was found in a cross-sectional angiographic study.¹⁴

Level of Evidence for Causality

The recent metabolic and epidemiological data provide a complementary body of evidence indicating adverse health effects of *trans* fatty acid consumption. The epidemiological data alone might be regarded as inconclusive because confounding by unmeasured variables is always possible, but the metabolic data give strong support for a causal interpretation. Some have questioned the interpretation of the conclusive evidence that *trans* fatty acids have adverse effects on blood lipids,¹⁵ but the epidemiological findings support the interpretation that, as expected, higher intake of *trans* fatty acids increases the risk of coronary heart disease. Like the tobacco industry, the oil processing industry claims that a cause-and-effect relationship cannot be established without a randomized trial,¹⁶ which is of course ethically and logistically impossible. Indeed, in this country further epidemiological studies will be difficult because the food sources of *trans* fatty acids have changed so dramatically over the last several years, such that even persons with stable diets will not have had stable *trans* fatty acid intakes.

Although we do not have fully conclusive evidence that *trans* fatty acids cause coronary heart disease, prudence suggests that we adopt a low threshold for evidence of harm for synthetic substances added to the food supply that have no known nutritional benefit. Further, it should be the responsibility of those who manufacture and sell an artificial food to show that the product is safe. We believe that the threshold of evidence for harm has been far surpassed in this case; the metabolic data alone should be a sufficient basis for limiting human intake of partially hydrogenated vegetable fat, and the epidemiological data provide further weight. A comparison with the regulation of potential carcinogens in the food supply indicates a gaping double standard. Chemical additives are disallowed

even in trace amounts that have no observable effects in humans and that, by mathematical modeling, might theoretically cause only a small number of cancers.

Quantitative Estimates of Risk

One estimate of the effect of *trans* fatty acids can be obtained by combining the effect of *trans* fatty acids on the ratio of total cholesterol to HDL cholesterol¹⁶ and the relationship between this lipid ratio and coronary heart disease risk.¹⁷ If 2% of energy is consumed in the form of *trans* fatty acids from partially hydrogenated fat (approximately the US average), the increase in the lipid ratio is about 0.14, for a relative risk of 1.07 (attributable risk of about 7%). This is likely to be an underestimate because the relationship between blood lipids and coronary heart disease risk was determined from a single blood specimen at one point in time. If data from the Nurses' Health Study are used, the estimated attributable risk would be about 35%. Although the percentage of coronary heart disease deaths in the United States attributable to intake of *trans* fatty acids is uncertain, even the lower estimates from the effects on blood lipids would suggest that more than 30 000 deaths per year may be due to consumption of partially hydrogenated vegetable fat. Furthermore, the number of attributable cases of nonfatal coronary heart disease will be even larger.

Alternatives to Trans Fatty Acids

Are there alternatives to the use of partially hydrogenated vegetable fats in our diets? Obviously, the answer is yes—such fats did not even exist until very recently. The evidence suggests that vegetable fats are best consumed in their natural unhydrogenated form, and that a balance of polyunsaturated and monounsaturated fatty acids is most desirable.¹⁸ The processed oil industry has argued that *trans* fatty acids only replace solid saturated fats,¹⁶ but this is not necessarily true. Unhydrogenated vegetable fats can be used in many of the frying and baking applications where partially hydrogenated fats are currently used (although more care is sometimes needed to maintain freshness and avoid burning), and olive or sesame oil can be used at the table. Some will still prefer solid fats for certain purposes. The occasional use of butter or lard will not have any important effect on health, and the fatty acid composition of lard and beef tallow, which contain mainly

unsaturated fats, may not be as unhealthy as generally believed. We now have newer knowledge about the effects of specific fatty acids on lipoprotein fractions.¹⁹ Although the health effects of palm oil need to be studied further, the saturated fat in this product has a less adverse effect on blood lipids, as assessed by the ratio of total cholesterol to HDL cholesterol, than do *trans* isomers. Moreover, margarines and shortenings can be made without *trans* fatty acids; these products are generally available in Europe, although not in the United States. Thus, there appear to be many ways to avoid *trans* fatty acids; the healthiest would require some individual changes in eating style, but others would be imperceptible to consumers.

Policy Options

What is the responsible public health response? One option would be to eliminate or greatly reduce the amount of artificial *trans* fatty acids in the food supply. The food industry could voluntarily phase out the production of *trans* fatty acids, but at present US producers are resisting even the acknowledgment that their products have adverse effects. Thus, a voluntary phaseout is unlikely, although in Europe the largest producer has publicly committed to reducing the *trans* isomer content of its products (O. Korver, Unilever, written communication, February 10, 1994). An alternative, of course, is a Food and Drug Administration (FDA) ban on or strict regulation of *trans* isomers in foods. As is true for low-level radiation, a truly inconsequential level of *trans* fatty acid intake is almost impossible to establish. Low levels of *trans* fatty acids are found in butter and beef fat (levels are about 5%, but the fatty acids are somewhat different in structure and function from those in partially hydrogenated fats).

A complementary approach would be to label foods as to their *trans* isomer content. The new labeling act effective in May 1994 requires labels to include the amount of saturated fat.²⁰ If the *trans* fatty acid content is not required on labels, food processors are likely to increase the content of these isomers in their products because they provide the same physical properties while decreasing the amount of saturated fat. In Canada, products labeled "low in saturated fat" have very high

levels of *trans* fatty acids.²¹ Some have suggested that *trans* fatty acids be included with the saturated fat on the label. While certainly better than ignoring *trans* fatty acids, this practice would be scientifically incorrect and would not recognize the metabolic and epidemiological evidence that *trans* fatty acids seem to have a greater adverse impact than saturated fats. We have been told by an FDA official that consideration was given to including *trans* isomers on food labels but the idea was discarded, in part because focus group participants did not recognize the term. This argument seems weak: the topic is new, and the public is capable of learning new terms and their meanings. A major limitation of the current food labeling requirements is that many products, including fast foods, which often contain extremely high amounts of *trans* isomers, are exempt. Moreover, these foods often carry egregiously deceptive labels such as "cholesterol-free" and "cooked in vegetable oil." Thus special warning labels should be used on these products, indicating that they were prepared with partially hydrogenated vegetable fat. Such warning labels are, indeed, more justifiable than those on cigarettes and alcoholic beverages, because the nature of the product is invisible to the consumer.

We favor a regulated phaseout or strict limitation of partially hydrogenated fat in the US diet. Short of such regulation, labeling requirements that include fast foods should be implemented immediately. □

References

- Emken EA. Nutrition and biochemistry of *trans* and positional fatty acid isomers in hydrogenated oils. *Ann Rev Nutr.* 1984;4:339-376.
- Dupont J, White PJ, Feldman EB. Saturated and hydrogenated fats in food in relation to health. *J Am Coll Nutr.* 1991;10:577-592.
- Kinsella JE, Bruckner G, Mai J, Shimp J. Metabolism of *trans* fatty acids with emphasis on the effects of *trans*, *trans*-octadecadienoate on lipid composition, essential fatty acid, and prostaglandins: an overview. *Am J Clin Nutr.* 1981;34:2307-2318.
- Booyens J, Louwrens CC, Katzeff IE. The role of unnatural dietary *trans* and *cis* unsaturated fatty acids in the epidemiology of coronary artery disease. *Med Hypotheses.* 1988;25:175-182.
- Senti FR. *Health Aspects of Dietary Trans Fatty Acids.* Bethesda, Md: Federation of American Societies for Experimental Biology; August 1985. Contract no. FDA 223-83-2020.
- Mensink RPM, Katan MB. Effect of dietary *trans* fatty acids on high-density and low-density lipoprotein cholesterol levels in healthy subjects. *N Engl J Med.* 1990;323:439-445.
- Zock PL, Katan MB. Hydrogenation alternatives: effects of *trans* fatty acids and stearic acid versus linoleic acid on serum lipids and lipoproteins in humans. *J Lipid Res.* 1992;33:399-410.
- Nestel P, Noakes M, Belling Bea. Plasma lipoprotein and Lp[a] changes with substitution of elaidic acid for oleic acid in the diet. *J Lipid Res.* 1992;33:1029-1036.
- Mensink RP, Zock PL, Katan MG, Hornstra G. Effect of dietary *cis* and *trans* fatty acids on serum lipoprotein[a] levels in humans. *J Lipid Res.* 1992;33:1493-1501.
- Thomas LH, Winter JA, Scott RG. Concentration of 18:1 and 16:1 *trans*unsaturated fatty acids in the adipose body tissue of decedents dying of ischaemic heart disease compared with controls: analysis by gas liquid chromatography. *J Epidemiol Community Health.* 1983;37:16-21.
- Willett WC, Stampfer MJ, Manson JE, et al. *Trans*-fatty acid intake in relation to risk of coronary heart disease among women. *Lancet.* 1993;341:581-585.
- Jones D. *Trans* fatty acids and dieting. *Lancet.* 1993;341:1093. Letter.
- Ascherio A, Hennekens CH, Buring JE, Master C, Stampfer MJ, Willett WC. *Trans* fatty acid intake and risk of myocardial infarction. *Circulation.* 1994;89:94-101.
- Siguel EN, Lerman RH. *Trans* fatty acid patterns in patients with angiographically documented coronary artery disease. *Am J Cardiol.* 1993;71:916-920.
- Brinton EA, Eisenberg S, Breslow JL. Increased apo A-I and apo A-II fractional catabolic rate in patients with low high density lipoprotein-cholesterol levels with or without hypertriglyceridemia. *J Clin Invest.* 1991;87:536-544.
- Applewhite TH. *Trans*-isomers, serum lipids and cardiovascular disease: another point of view. *Nutr Rev.* 1993;51:344-345.
- Stampfer MJ, Sacks FM, Salvini S, Willett WC, Hennekens CH. A prospective study of cholesterol, apolipoproteins, and the risk of myocardial infarction. *N Engl J Med.* 1991;325:373-381.
- Willett WC, Sacks FM. Chewing the fat—how much and what kind? *N Engl J Med.* 1991;324:121-123. Editorial.
- Mensink RP, Katan MB. Effect of dietary fatty acids on serum lipids and lipoproteins: a meta-analysis of 27 trials. *Arterioscler Thromb.* 1992;12:911-919.
- Legislative highlights: final food labeling regulations. *J Am Diet Assoc.* 1993;93:146-148.
- Ratnayake WMN, Hollywood R, O'Grady E, Pelletier G. Fatty acids in some common food items in Canada. *J Am Coll Nutr.* 1993;12:651-660.

EXHIBIT D

*Sounding Board***TRANS FATTY ACIDS AND CORONARY HEART DISEASE**

TRANS unsaturated fatty acids are produced commercially in large quantities by heating vegetable oils in the presence of metal catalysts and hydrogen to form shortening and margarine.¹ They are so named because the carbon atoms adjacent to their double bonds are on opposite sides, resulting in a straight configuration and a solid state at room temperature. In contrast, naturally occurring unsaturated fatty acids contain double bonds as cis isomers, with adjacent carbons on the same side of the double bond, resulting in a bent shape and a liquid state at room temperature. Partial hydrogenation, the process used to create trans fatty acids, is primarily used to produce solid fats. However, it also removes essential polyunsaturated fatty acids, such as linolenic acid and linoleic acid, because they tend to oxidize, causing the fat to become rancid with prolonged storage or when exposed to the high temperatures used for commercial deep-fat frying. Trans fatty acids are also produced in the rumen of cattle, resulting in low levels of these isomers in dairy and beef fat.

Production of partially hydrogenated fats began early in the 20th century and increased steadily until about the 1960s, as processed vegetable fats displaced animal fats in the diets of most people in industrialized countries. The initial motivation was lower cost, but health benefits were later purported. Levels of trans fatty acids in margarines have declined as softer margarines have become popular. The average per capita consumption of trans fatty acids from partially hydrogenated oils has remained at about 2 percent of calories since the 1960s, because of the increased use of these fats in commercially baked products and fast foods.

By the early 1990s it became apparent that the consumption of trans fatty acids had uniquely adverse effects on blood lipid levels in metabolic studies² and was associated with an increased risk of coronary heart disease in epidemiologic investigations.³ A 1995 industry-sponsored review concluded that there was insufficient evidence to take action and that further research was needed.⁴ Since then many more metabolic and epidemiologic studies have confirmed the adverse effects of trans fatty acids, stimulating the Food and Drug Administration to announce plans to include the trans-fatty-acid content of foods on product labels. One important issue is whether to list the amount of trans fatty acids separately or to combine it with the saturated-fat content. In this article we shall review the effects of trans fatty acids

on blood lipid levels that have been identified in metabolic studies and the associated risk of coronary heart disease that has been identified in epidemiologic studies.

METABOLIC STUDIES

Early metabolic studies generally found that the cholesterol-raising effect of hydrogenated fat was less than that of saturated fats.¹ However, the focus on total cholesterol masked the fact that although trans fatty acids and saturated fatty acids increase low-density lipoprotein (LDL) cholesterol levels to a similar degree, trans fatty acids also lower high-density lipoprotein (HDL) cholesterol levels. A 1990 study demonstrated that the replacement of a diet high in oleic acid (10 percent of the daily energy intake), the primary monounsaturated fat in diets, with a diet high in trans fatty acids increased LDL cholesterol levels by 14 mg per deciliter (0.37 mmol per liter) and decreased HDL cholesterol levels by 7 mg per deciliter (0.17 mmol per liter).² In contrast, replacement of oleic acid with saturated fatty acids caused a similar increase in LDL cholesterol levels, but had no effect on HDL cholesterol levels. As a result, the ratio of LDL cholesterol to HDL cholesterol was significantly higher with the trans-fatty-acid diet (2.58) than with the saturated-fat diet (2.34) or the oleic-acid diet (2.02). These findings have been confirmed in many studies,⁵⁻¹² including the study by Lichtenstein et al.¹² reported in this issue of the *Journal*, with the use of various levels and mixtures of trans fatty acids. Figure 1 summarizes the randomized trials that directly compared the effects of trans fatty acids with those of isocaloric amounts of cis fatty acids.^{2,5-12} When the data are available, the figure also shows the effects of saturated fatty acids in the same studies.

Because trans fatty acids increase LDL cholesterol to levels similar to those produced by saturated fatty acids and also decrease HDL cholesterol levels, the net effect of trans fatty acids on the ratio of LDL cholesterol to HDL cholesterol is approximately double that of saturated fatty acids. The only somewhat discordant result was from a small Malaysian study,¹¹ which found a considerably stronger adverse effect of trans fatty acids; we have conservatively excluded this result in estimating the regression line in Figure 1. We also did not include the study by Almendingen et al.¹³ in Figure 1 because they did not compare a diet high in trans fatty acids with a diet high in oleic acid or polyunsaturated fat. Almendingen et al. found that trans fatty acids from hydrogenated fish oil but not from hydrogenated soybean oil increased the ratio of LDL cholesterol to HDL cholesterol more than did butter.

The effect of trans fatty acids on the ratio of LDL cholesterol to HDL cholesterol was significantly larger than that of saturated fatty acids in each of the six